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CHEMICAL EQUIPMENT PREVIEW

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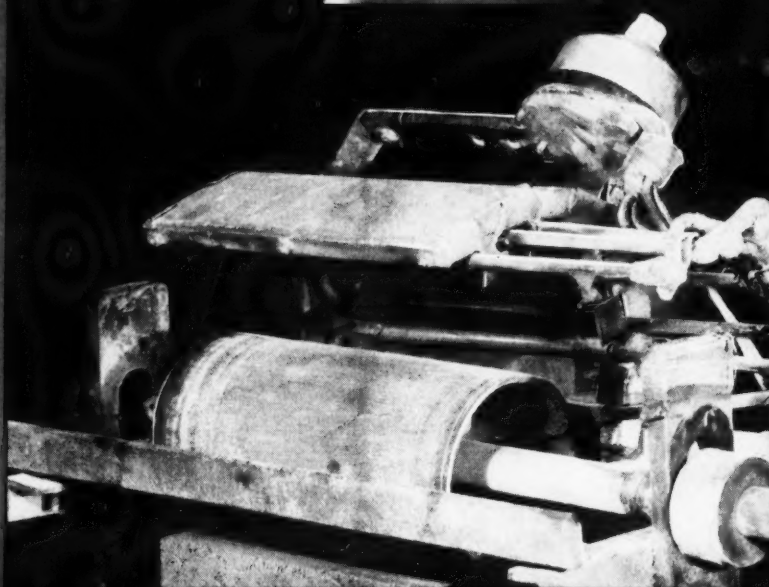
(July-August)

1942

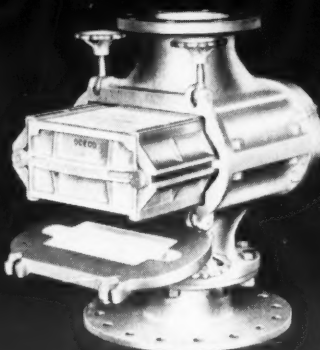
Latest Developments in Equipment
Materials and Products for Engineers
Chemists and Executives in
Chemical Process Manufacturing



Synthetic rubber thread tests show 700% elongation; non-toxic, resists body oil



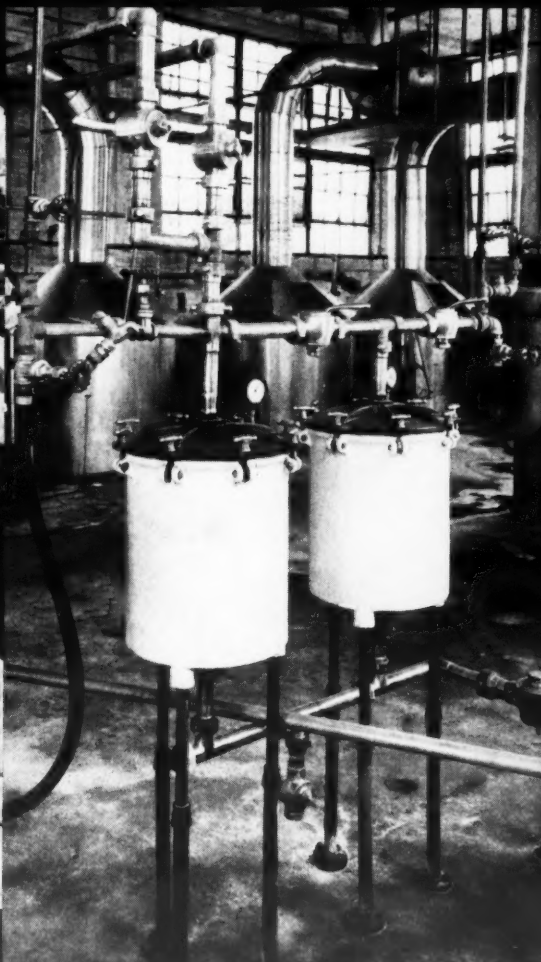
Electric heating unit on tile machine keeps roller hot, dry and free from loose, wet particles; improves quality



Non-corrosive arrestor guards tank vent from entering flame

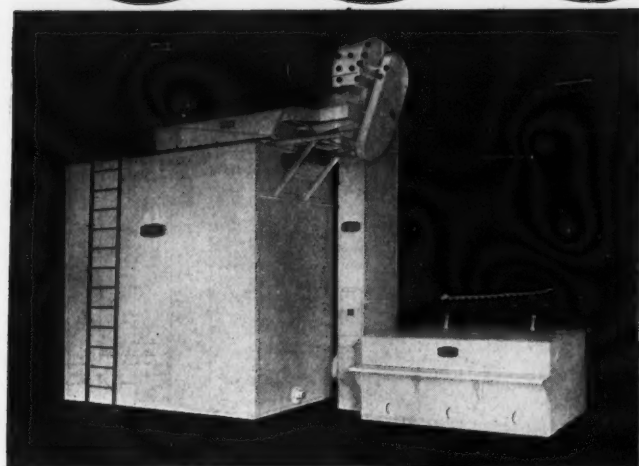


Paint brushes salvaged in drive to ease acute bristle shortage



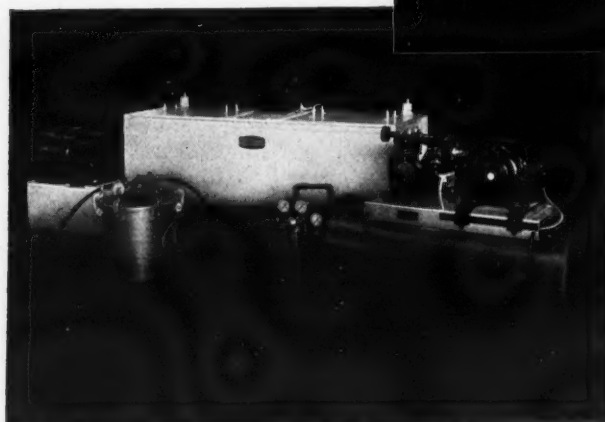
Porcelain coated tanks & filter stones handle corrosive product; easy cleaning

READ HELPS SPEED THE FLOW OF WAR CHEMICALS

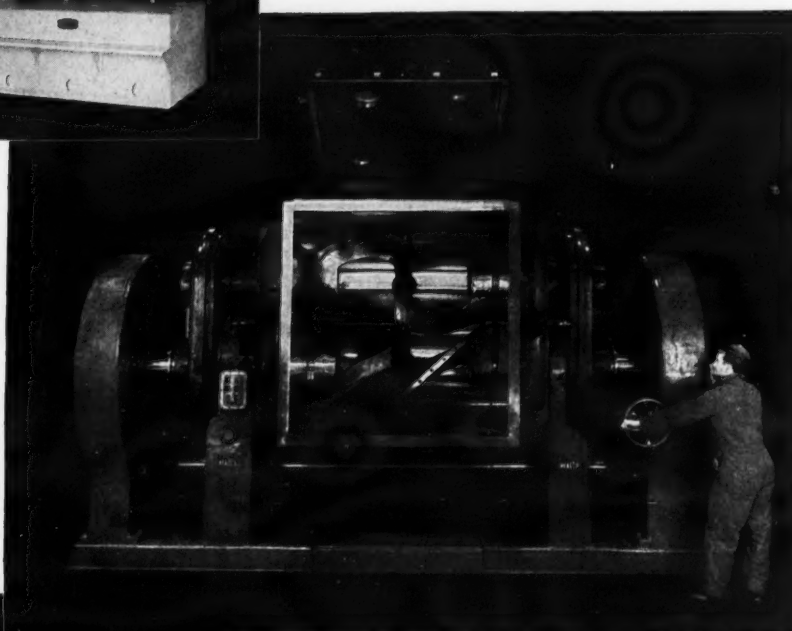


Readco Material Handling Equipment is designed to coordinate all steps in the efficient flow of powdered or granular material in any process without loss of material. Systems may be provided for continuous or batch operation.

Readco Single Packing Gland Vacuum Mixers are designed for operation under high vacuum, enabling the evaporation of moisture or solvents from materials being mixed at temperatures below their atmospheric boiling points. These machines are adapted for materials requiring treatment in inert atmosphere or under elevated pressures. Single packing gland construction eliminates possibility of contamination and minimizes maintenance.



READCO chemical process equipment is individually designed to improve the production cycle by efficient mixing, blending and handling of chemical materials with minimum material loss and contamination. In addition to this complete line of process equipment for laboratory, pilot plant and commercial use, Readco is providing powder mixers, amatol preheaters, howitzers, torpedo parts, et al., in vast numbers under both prime contract and sub contract for the duration.



Readco Spray Blenders are designed for thoroughly incorporating liquids or emulsions into granulations and powders. Into each cover is built a unique spray atomizing attachment which insures positive disbursement of liquid, injected at exact predetermined quantities and rate of flow, leaving finished batch free of lumps or excessively moistened particles.

Material Handling Equipment, Pilot Plant Mixers, Bottom Discharge or Tilting Bowl Mixers, Blenders, Sifters, Shredders, Acetylators, Vertical Mixers, and Pharmaceutical Equipment

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JULY-AUGUST, 1942

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Then, to make sure you keep abreast of the latest developments . . . perhaps in something you have heard nothing about . . . you'll want to browse through the rest of the of the pages.

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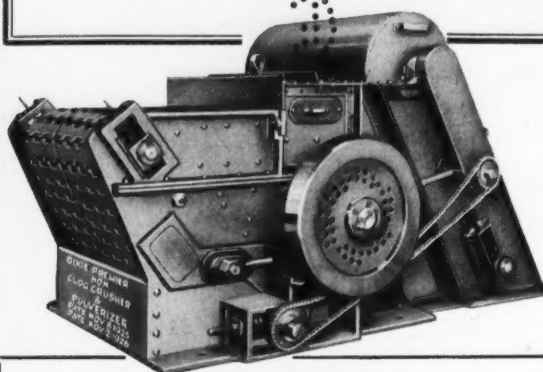
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NOTE THESE TYPICAL TOUGH JOBS LICKED BY DIXIES

1. Replaced four crushers for high moisture content bauxite . . . cut power in half . . . reduced drying costs . . . increased production.
2. Efficiency crushing clay balls to reclaim phosphate in Florida phosphate plants.
3. Crushing phosphate muck in T.V.A. Tennessee plant.

HERE'S WHY: . . .

The Dixie Non-Clog Hammermill is the only crusher with a moving breaker plate. Provides positive mechanical feed. No manual pushing of material needed. Even the most plastic, wet, clayey material will not slow production or clog hammers. This feature alone has saved the cost of 10 men in one company!

And because the Dixie moving breaker plate can be adjusted forward or backward from the hammer points, quality and size of production can be controlled. This feature also provides additional assurance against clogging.

These are but two of Dixie's outstanding features. Send coupon below for free booklet, "More Efficient Crushing of Raw Materials" which gives complete facts.

DIXIE MACHINERY MFG. CO.

4202 Goodfellow Blvd., St. Louis, Mo.

GET THE FACTS!

Dixie Machinery Mfg. Co.
4202 Goodfellow Blvd., St. Louis, Mo.

Please send free booklet on Dixie Non-Clog Hammermills. We want to crush _____

Name _____

Company _____

Address _____

City _____ State _____

When inquiring specify CEP4777 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

Edited for Production and Laboratory
Men in the Chemical Process Industries

★

TO VICTORY

TO VICTORY . . . through maximum production of the vital chemical process Weapons of War.

. . . to this the Editors and Publishers of CHEMICAL EQUIPMENT PREVIEW pledge their total support.

To you in the Chemical Process Plants and Laboratories of America, we pledge our entire energies to bring you the news — facts of developments in equipment, new applications, new processes . . . that your vital materials of War may be speeded, in ever increasing quantities, to our men on battle fronts.

To you men . . . and to all men in Government service concerned with production of chemical process products . . . CHEMICAL EQUIPMENT PREVIEW will be sent regularly, at your request . . . without charge of any kind. For your convenience, a request form is provided in the center spread of this issue.

★

"That's Interesting"

Collisions between high flying fowl such as geese or wild ducks and warplanes have been frequent enough to prompt earnest research to perfect transparent glass-plastic combinations which provide high impact resistance at no sacrifice of lighting and ice formation insurance. In this connection, the Pittsburgh Plate Glass Co. tells of an interesting Government test in which it cooperated with the Mellon Institute of Industrial Research. Tests of dead chickens striking a windshield were accomplished with a compressed air gun of 3½ in. diameter. The birds were fired at the rate of 200 ft. per second. The government and industrial experts are now working on a gum that will fire a dead bird of 16 lbs. 270 miles per hour.

★

"Fighting the Fire Bomb" is the name of an instructive Civilian Defense training film designed to combat the enemy's attempts to disrupt civilian and industrial life. It contains many lessons and warnings that plant executives might well take to heart. Since the weapon which it is expected will be used most to break up morale and production efforts is the fire bomb, the first step in preparing against such an anticipated attack is a thorough checkup of fire-fighting equipment now in place. Signal and sprinkler systems and fire extinguishers are false promises of security unless they are ready for instant use when danger strikes. Alarming reports of the sabotage of fire extinguishers in different sections of the country emphasize the importance of regular inspection and a 24-hour guard over all fire fighting apparatus. Buckets of sand and long-handled shovels should supplement the regular fire equipment. Only water-filled and water-solution types of extinguishers are effective on the bomb itself, but the vaporizing liquid (carbon tetrachloride base) and carbon dioxide types can be used on fires started by the bomb. It will ordinarily require two 2½ gallon water units to dispose of one bomb and its surrounding fire.



PICTURE-MINDED? You'll Like This "Paper" Controller

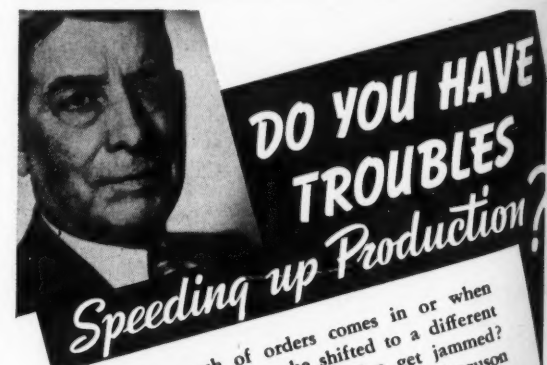
Die-stamped from cardboard, this "paper" Micromax Temperature Controller shows, almost as well as the actual instrument, the mechanical advantages of the "balance" method for measurement and control. It shows a controller with no helixes, calibrated springs, jewelled bearings or long pointers. Instead it presents a rugged, motor-driven machine, containing its own standard of accuracy and offering the ideal solution to thousands of production problems where superior precision and dependability can increase the yield of a process or improve the quality of a product.

This "paper" Micromax will be sent on request. Ask for Die Out ND(1).



WEASURING INSTRUMENTS • TELEMETERS • AUTOMATIC CONTROLS • HEAT-TREATING FURNACES
ad ND(2)

When inquiring specify CEP4778 — see information request blank, pgs. 2-3



• WHEN a rush of orders comes in or when production lines have to be shifted to a different size package, does your production get jammed? Or is your plant equipped with Alvey-Ferguson Scientifically Planned Conveyors that give endless stream transportation even under unusual conditions? Whatever your product handling problem, our new brochure — profusely illustrated — will give you a "new angle" on it. Write for it today. The Alvey-Ferguson Co., 154 Disney Street, Cincinnati, Ohio.



When inquiring specify CEP4779 — see information request blank, pgs. 2-3

That's Interesting

Hammer heads made of "Pyralin" are said not to break or chip and not to mar silver, gold or aluminum. Metal workers and mechanics are finding many practical applications for them and like their quality of not absorbing water or oil.

★

High frequency radio waves sent through ordinary power lines may soon operate electric substations and shunt power by remote control from one city to another in war time emergencies. Westinghouse Mfg. & Electric Co. has developed new relays so sensitive they can pick up radio impulses at robot substations miles from the central control board. The relays are then able to start a whole series of operations automatically from throwing switches to building up additional steam power.

★

The rubber life rafts that have saved the lives of many of our men in naval combat are made with approximately the same amount of rubber used in two standard automobile tires — about 28 lbs.

★

Bacteria inherit family traits and, like men, include both weaklings and "tough guys" in their ranks, according to the Westinghouse Lamp Division. Bacteria are also attacked and destroyed themselves by invisible viruses known as bacteriophages. Most of these bacteriophage fatal to bacteria are harmless to man.

★

Tiny robot sentries — new secret devices built into wire fences inclosing war production plants — are said to be saboteur proof by Du Pont engineers who developed the system. The acoustic fence "overhears" such sounds as birds chirping, the snip of a wire cutter, even whispers, and relays them to a central control room and indicates the precise point of disturbance.

★

A belt conveyor 10 miles long was constructed to carry gravel for use in the Shasta Dam. Driven electrically, it operated between Redding and Corona, California.

★

If electric fans are scarce this summer, consider that a dozen of them contain the amount of copper needed in fabricating a 20 mm. aircraft cannon.

★

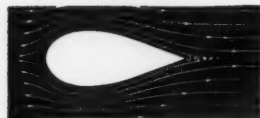
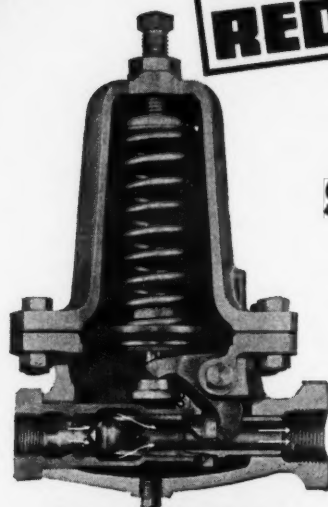
Metal conservation is aided by nylon's entrance into the field of electrical insulation. Household appliances are being made in limited quantities with nylon insulated wiring. Nylon's efficiency permits the manufacture of motors requiring 10 to 15% less space.

For more information on product at right, specify CEP 4780 . . . see information request blank between pages 2-3.

Eliminating

LOST PRODUCTION HOURS DUE TO "TIME OUT" FOR VALVE TROUBLES...

CASH STANDARD
Streamlined
REDUCING VALVE
TYPE 1000
PRESSURE



HERE'S THE "1000" FLOW PATTERN
The Streamlined form of the inner valve eliminates turbulence. It produces the flow pattern shown above which makes for maximum capacity when it is needed most and permits accurate pressure control under toughest working conditions.

You can find out full details on all of the Type 1000 benefits by reading Bulletin "1000" — send for it!



Contributes toward

SPEEDIER PRODUCTION

Today, with speed in output the keynote of American industry, trouble-free, smooth performance of equipment is essential to maintain schedules. Keeping idle hours down to the very minimum is a vital need in any type of production.

Because of these very things, the CASH STANDARD Streamlined Type 1000 Reducing Valve has a place of importance in industry's fast-operating set-up . . . it is an immediate answer to the practical elimination of "time-out" periods.

When this valve was first designed, 'round-the-clock service — month in and month out was the objective. How well the Streamlined Type 1000 fits into the pace-setting production picture now is seen by its no-trouble, maintenance-free operation for years past.

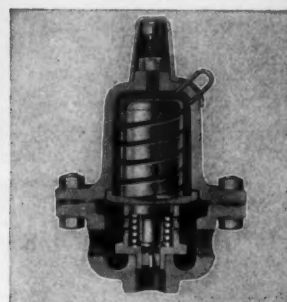
Among the benefits users get with it are: maximum capacity when needed most — accurate pressure control under toughest working conditions — elimination of failures — cost-saving operation.

A
CASH STANDARD
"GET ACQUAINTED"
COLUMN



Question: "Don't you people make anything besides that Streamlined Valve you talk about so much?"

Answer: "Yes Sir; we do! And we propose to picture one or two of them here each time."



Cash Standard Type Q Relief Valve: maintains constant upstream pressure by relieving into lower downstream pressures, regardless of variations in downstream pressure. For steam, water, air, oil, many gases. (Similar valve for refrigeration fluids.)

Iron or bronze bodies; bronze trim; pressures up to 350 lbs.; top temperature 500° F. Screwed ends; sizes 1/4" to 2".



Cash Standard Type 4190 Valve: holds constant back pressure on inlet side regardless of variation in outlet pressure or changes in load. A multiport, large capacity valve. Used on suction line in refrigeration practice. Also used extensively as bypass valve for oil pumps.

Iron or bronze bodies; iron trim. Screwed ends 1/2" to 2"; flanged ends 1 1/4" to 6".

CASH STANDARD
CONTROLS..
VALVES

A. W. CASH COMPANY
DECATUR, ILLINOIS

Get Free Bulletins on
Above . . . Write to
A. W. CASH COMPANY
DECATUR, ILL.

Hackney
MILWAUKEE

2-PIECE ACID DRUMS

FOR GREATER STRENGTH AND
... LONGER LIFE

• Top and bottom ends of the Hackney 2-piece Drum are pressed from circular sheets of steel. There are no longitudinal or chime seams — only one circumferential weld located between and protected by two heavy I-bar rolling hoops. Hoops are held securely in place by means of lugs which are welded to both hoops and drum body.

• Hackney cold-drawn, 2-piece Acid Drums have proved their greater strength and longer life in actual service. Why not see how you can take advantage of Hackney economies in the shipping, handling and storing of your products? Write for complete details today — no obligation.



PRESSED STEEL TANK COMPANY

General Offices: 1493 So. 66th St., Milwaukee, Wis.
CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

When inquiring specify CEP4781 — see information request blank, pgs. 2-3



CAN YOU TELL quickly what size steam trap you need on that autoclave, steam main, or header drip? Are you sure what style of trap should be used to get all the air instantly out of that steam kettle or steam chest?

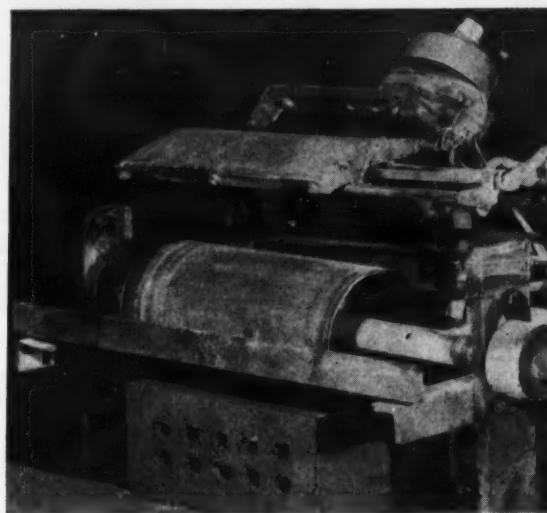
These questions are simplified for holders of the book illustrated above. This free book tells what a steam trap must do . . . how it does its job . . . why air elimination is important . . . how to figure condensation rates . . . gives frequently used condensation rate tables . . . etc.

Send for this useful book today—don't deny yourself its help. The book doesn't cost you a cent.

THE V. D. ANDERSON COMPANY

1954 WEST 96th STREET • CLEVELAND, OHIO
When inquiring specify CEP4782 — see information request blank, pgs. 2-3

NEW SOLUTIONS OF PLANT PROBLEMS



TILE MACHINE . . . semi-circular metal equipped with electric heating unit

Electric Heat Aids Brick Making

Faster production and higher quality of work result when heaters are used in surface finishing

Problem—In the manufacture of bricks at the plant of a large builder's supply company, clay is forced through a metal die in an endless rectangular form, then onto a conveyor which takes it to the cutting machine. To smooth down the rough surface left on the face of the clay by the cutting machine, the plant superintendent rigged up a roller which contacts the face of the clay as the form goes through the processing machinery. However, in this operation, loose particles of wet clay tended to stick to the roller, causing the surface of the finished brick to be marred. In an attempt to eliminate this condition, heat from a torch was applied to the roller, but this proved unsatisfactory.

Solution—Electric heat was employed. Four 750-watt Calrod heaters were mounted on the inner side of a semi-circular metal plate which was erected directly above the roller.

Results—The electrically heated plate now keeps the roller hot and dry, entirely free from particles of clay, with a resulting improvement in the speed of production and the quality of the finished product.

GENERAL ELECTRIC CO., Dept. CEP, Schenectady, N.Y.

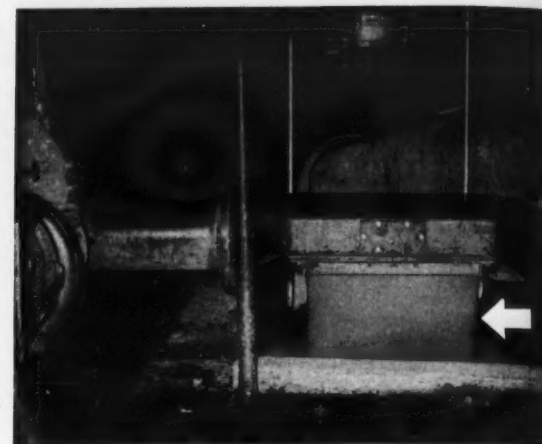
When inquiring specify CEP 4783 — see information request blank, pgs. 2-3

Scrap Iron in Wood Pulp Caught By Double Gap Magnets

Damage to pump impellers and consequent costly delays eliminated

Problem—Large paper mill was experiencing serious damage to pump impellers caused by foreign scrap iron, small nuts, bolts and miscellaneous metal that got into the pulp.

Solution—Installation of two high intensity double gap rectangular magnets has eliminated the difficulty. The magnets are installed after the pump washing operation—pulp after leaving the diffusers goes to a storage tank from where it is pumped to screens. Exact point of in-



DOUBLE GAP MAGNETS catch tramp iron in wood pulp . . . save pump impellers

stallation of the magnets is between storage tank and pump. At present 1,600,000 gallons of 3% pulp passes over each magnet in each 24 hours.

Results—Since installation of the magnets the mill has not lost a single pump impeller or five minutes of shut down because of scrap metal getting into pumps or other machinery. Formerly an average of two pump impellers per week were damaged and lost, resulting in costly delays and replacements. Upon one of the recent regular cleanings of the magnets the following were removed: two peck buckets of foreign scrap iron including a 1/8 in. welding rod, 2 ft. long, a 2 in. pipe, 30 in. long, numerous 1 in. hex nuts and a variety of other metal scrap. Details on this type of equipment from

DINGS MAGNETIC SEPARATOR CO., Dept. CEP, 537 E. Smith St., Milwaukee, Wis.

When inquiring specify CEP4784 — see information request blank, pgs. 2-3

Safety Tubing Needs No Flaring, Threading, Welding or Soldering

Twenty-eight-page-and-cover catalog gives detailed description of a safety tube and pipe coupling that requires no flaring, threading, welding or soldering. Text and illustrations concern the many applications of this fitting in many fields including diesel, automotive, oil refining, refrigeration, machine tool and trucking. Available on request. Catalog E-402.

WEATHERHEAD CO., Dept. CEP, Cleveland, Ohio.

When inquiring specify CEP 7885 — see information request blank, pgs. 2-3

Resinoid Wheels for Materials Handling

Attractive two-color, eight-page catalog adopts magazine style to present much of the information it offers regarding resinoid wheels. The center spread of the book provides graphic and interesting treatment of the floor protection, weight and impact capacity of these wheels as well as their non-sparking, acid resisting properties and free rolling quality. Photos and sectional views augment the text explaining compounding and laminating principles followed in production. Tables give complete specifications for all sizes. Bulletin 53BI available upon request.

RAPIDS-STANDARD CO., Dept. CEP, Grand Rapids, Mich.
When inquiring specify CEP4786 — see information request blank, pgs. 2-3

LITERATURE

Wire Cloth Handbook

A handbook on woven wire screen and wire cloth products contains a wealth of information of practical value. Spiral bound, it is printed on fine coated stock which affords clear and faithful reproduction of illustrations of equipment used in processing these products as well as sectional views of space, mesh and filter cloth in actual size. Included in the most complete assortment of standard and special cloths are galvanized, tinned mill, gasketed metallic filter, backing and beer filter. Riddles and strainers are given deserved attention and testing sieves are dealt with in detail. Also, of interest is a sieve testing machine which is said to simulate, if not actually duplicate, the recommended and approved hand sieve test technique. A variety of fabricated cloth parts are also illustrated and described. Instructions for testing wire cloth, making various kinds of estimates are included. Complete specification tables and other data make it easy to make selections. Catalog C available upon request.

NEWARK WIRE CLOTH CO., Dept. CEP, 351-365 Verona Ave., Newark, N. J.

When inquiring specify CEP4787
— see information request blank, pgs. 2-3

Care of Stainless Steel

Series of six wall cards, 12½" by 18" for convenient posting in the plant, give detailed information on how to care for and prolong the life of specific types of stainless steel equipment. Explanation of underlying causes of wear and corrosion are given in bulletin style. In addition, there is a tabulation of cleansers by trade name, method of application and effect on the finish. Included in the series are cards specifically for (1) food handling and serving equipment, (2) food and beverage processing equipment, (3) dairy equipment, (4) process and chemical equipment, (5) pulp and paper equipment and (6) textile equipment. Cards are available upon request.

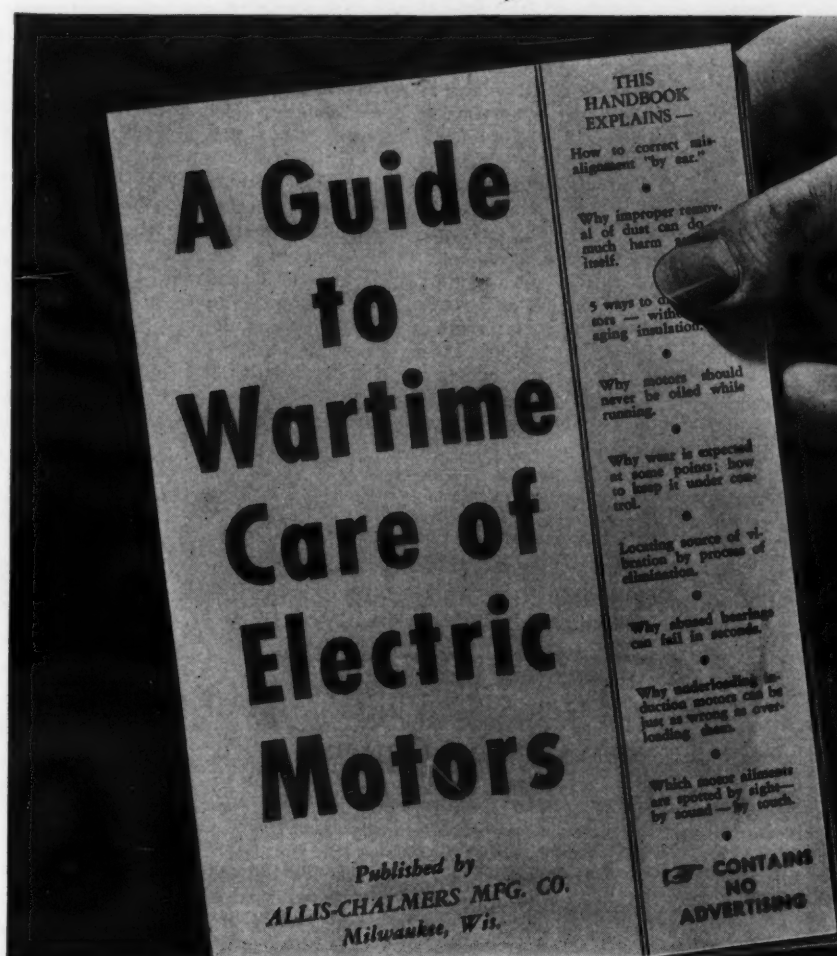
REPUBLIC STEEL CORP., Dept. CEP, Cleveland, Ohio.

When inquiring specify CEP4788
— see information request blank, pgs. 2-3

For more information on product at right, specify CEP 4789
... see information request blank between pages 2-3.

Announcing

A VITAL NEW AID TO VICTORY PRODUCTION...



Your Copy is Free!

ENGINEERS — production managers — maintenance men — executives ... here's a valuable new handbook that you're sure to want for your technical library... a book designed to help you meet today's new motor maintenance problems!

And they are new problems...

Wartime's three-shift production has crowded *triple-duty* for motors into every day. New working days have been added!

All told, a motor's working time has skyrocketed since the emergency from 1800 hours a year to 8700 hours!

That means that inspection, adjustment, lubrication check-ups — all must be quadrupled... and must be geared up to wartime standards of efficiency!

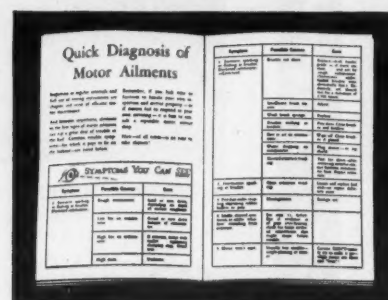
To help you most, "A Guide to Wartime Care of Electric Motors" applies to *all* makes of standard, general-purpose motors. And it takes a *fresh* look at motor care.

For Allis-Chalmers recognizes — as you do — that maintenance "as usual" went out with Pearl Harbor.

Send for this Valuable new Handbook today



COMPLETELY ILLUSTRATED — Making principles of motor care crystal clear. Of particular value for training new men.



HANDY REFERENCE — Helping you catch motor troubles at early stage. Tear out order form and send for *your* free copy!

ALLIS-CHALMERS MFG. CO.
Milwaukee, Wisconsin

Gentlemen:

Yes, I would like to receive *free of charge*
"A Guide to Wartime Care of Electric Motors".

(Name)

(Title)

(Company)

(Street Address)

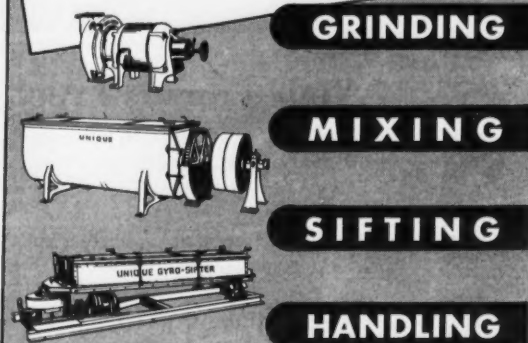
(City and State)

A 1533-13



ROBINSON PROCESSING EQUIPMENT

— for the CHEMICAL INDUSTRY



Firms with war contracts have immediate priority on our complete engineering and manufacturing facilities. Detailed manuals available. Tell us your problem.

ROBINSON MANUFACTURING COMPANY
WORKS: MUNCY, PENNA.
30 CHURCH STREET • NEW YORK, N. Y.

When inquiring specify CEP4790 — see information request blank, pgs. 2-3

A desirable PUMP VALUE

in HORIZONTAL and VERTICAL PUMPS

The very HIGH practical performance delivered by TABER pumps in the Chemical Defense Industry is a proven VALUE. Write for concise bulletins.

★ ★ ★

Taber Pump Co. (EST. 1859)
320 ELM ST. BUFFALO, N. Y.

5410

★ **TABER** ★

When inquiring specify CEP4791 — see information request blank, pgs. 2-3

NEW SOLUTIONS OF PLANT PROBLEMS

Yarn Bleaching Formula Cuts Chlorine Consumption

Use of Textone to activate sodium hypochlorite achieves substantial savings

Problem — One of the difficulties encountered in bleaching and scouring yarns is eliminated in a recently announced method for handling these operations in stainless steel package machines by a single stage process, that is the amount of chlorine consumption.

Solution — A typical case involves the use of a machine with capacity of 450 gal. Solution used: synthetic detergent 1 1/3 lbs., Textone 4 lbs., tetrasodium pyrophosphate 16 lbs., available chlorine as sodium hypochlorite 8 1/3 lbs. All the chemicals except the sodium are dissolved and circulated for 5 minutes at a temperature of from 95 to 100 degrees F. The hypochlorite is then added and the circulation is continued at the same temperature for 45 minutes. Then the temperature is raised to 200 degrees F and circulation is continued for another 45 minutes. Bleaching occurs during the first part of the operation; scouring continues as the temperature is raised and the chlorine content of the bath is gradually depleted. After this treatment the yarn is washed in hot water, 180 degrees F. for five minutes.

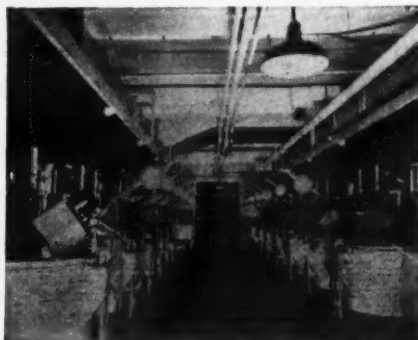
Results — Use of Textone to activate hypochlorite substantially reduces the amount of chlorine in bleaching.

MATHIESON ALKALI WORKS, Dept. CEP, 60 East 42nd St., New York, N. Y.

When inquiring specify CEP4792 — see information request blank, pgs. 2-3

Watt-hour Meter Used in Control of Electroplating Current

Provides accurate and refined results; reduces costs; eliminates cumbersome shunts across electrodes



WATTHOUR METER CONTROL . . . handles electroplating processes

Problem — In electroplating permanent magnets, a large electrical manufacturer sought some method of control other than the amperage hour meter, since use of the amperage hour switch necessitates placing the shunt near the plating tank in the heavy output lead. This means taking up valuable space for the shunt and taking extra precaution to protect it and the leads from plating solution and fumes.

Solution — An ordinary watt-hour meter was connected to the alternating current side of a rectifier of the type used to supply direct current for electroplating. The register for the watt-hour meter includes a switch device adapted for closure after a predetermined amount of energy has

passed through the meter. This switch operates a circuit breaker to open the energizing current circuit and thereby interrupts the plating or charging circuit when the desired plating thickness is attained.

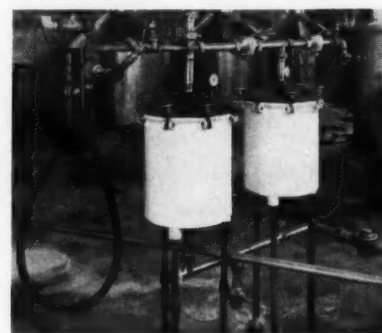
Results — Since the voltage of the alternating current is substantially constant, the number of ampere hours of the output rectifier is proportional to the energy consumed, and no special ampere hour meter or other timing device is necessary to obtain accurate electroplating results. The watt-hour meter may be placed on a switchboard some distance away from the plating tank. The unit costs less than the ampere hour meter commonly used, and it eliminates expensive and cumbersome shunts across the plating electrodes.

WESTINGHOUSE ELECTRIC AND MFG. CO., Dept. CEP, East Pittsburgh, Pa.

When inquiring specify CEP4793 — see information request blank, pgs. 2-3

Porcelain Tank and Porous Filter Stones Filter Corrosive Product

Take place of specific stainless steel equipment unavailable through priority



PORCELAIN, STAINLESS STEEL and porous filter stones make equipment acid resisting

Problem — A clarifying filtration was desired on a product with corrosive properties that required stainless steel filtering equipment. Priority rating made this unavailable.

Solution — Stainless steel pipes and valves were found in the plant's maintenance department. Filtering units were obtained which consist of acid-resistant porcelain coated tanks in which the suspended filter cake is supported by porous stone members.

Results — Filter was quickly installed and put into service. Filter stones made possible the rapid cleaning of the filters with water and compressed air for backwashing without dismantling the filter units and without injury to the cake supporting surface due to excessive pressures.

LEVAL FILTER CO., Dept. CEP, 1319 So. Michigan Ave., Chicago, Ill.

When inquiring specify CEP4794 — see information request blank, pgs. 2-3

Have You a "New Solution"?

If you have recently solved a problem in chemical process manufacturing, through a new application or new use of your regular products, the Editors invite you to submit the fact for publication in this department . . . in over 27,000 copies.

In submitting your "solution" please be sure to give the pertinent facts of (a) the problem, (b) just what was done and (c) what the results were. Send to

The Editors, CHEMICAL EQUIPMENT PREVIEW
737 N. Michigan Ave. Chicago

APPLICATIONS

Adsorber Canisters Cut Cost of Air-Conditioning Cafeteria

20,000 CFM of air treated and returned maintaining comfortable and healthful atmosphere

Problem — Large industrial plant wished to cut excessive consumption of fuel, electric current and water and save on the refrigeration installation involving large tonnage of metal. The conditioned air in the cafeteria was to be purified and used over and over again with only a small addition of new air for oxygen requirements if the high operating costs were to be reduced. It has been the practice to discharge the entire volume of conditioned air as soon as it accumulated odors and bring into the inclosure new, conditioned air.

Solution — The principle involved here and other installations represents the practical application of the theory that conditioned air can be used over and over again if it is rendered fit for consumption and that only a comparatively small amount of new air is required to provide proper oxygen conditions. To put this to practice in a satisfactory manner 700 adsorber canisters of special design which capture and hold the accumulated odors and gases were installed in the air conditioning equipment. These were adequate to treat 20,000 CFM of return air making it fit for return to the cafeteria. This process is carried on continuously with the addition of relatively little addition of new air.

Results — Use of the adsorber canisters permitted the installation of a relatively small but completely adequate air conditioning system, saving approximately 50 tons of metal and equipment. It is also estimated that a saving of some 45,000 KW of electric current used for cooling purposes will be saved and 40,000 gallons of oil per season for heating. This will also result in decreased water consumption, lessening the drain on reservoirs taxed because of war production and lack of rain in some sections.

DOREX DIVISION, W. B. CONNOR ENGINEERING CORP., Dorex Div., Dept. CEP, 114 East 32nd St., New York, N. Y.

When inquiring specify CEP4795 — see information request blank, pgs. 2-3

Engineering Data Book on Centrifugal Motor Pumps

Complete engineering data on centrifugal motor pump units and base mounted units are described in an attractive, large size, 36-page book containing many illustrations, sectional views and tables. Performance data and engineering recommendations as well as head capacity tables and dimension charts prove helpful in determining pump requirements. Detailed information is provided on a wide range of pumps with capacities of from 10 to 2750 GPM and for heads up to 575 ft.

ALLIS CHALMERS MFG. CO., Dept. CEP, Milwaukee, Wis.

When inquiring specify CEP4796 — see information request blank, pgs. 2-3

Magnetic Type Gravity Induction Separator

Twelve page bulletin illustrates and describes a new magnetic type gravity induction separator, particularly suited for treating materials of highly reluctant magnetic values. Interesting information concerning the facilities of this organization for research work is also presented. Bulletin 701 is available upon request.

STEARNS MAGNETIC MFG. CO., Dept. CEP, 642 So. 28th St., Milwaukee, Wis.

When inquiring specify CEP4797 — see information request blank, pgs. 2-3



with

- ★ FRONT WHEEL POWER DRIVE
- ★ CONTROLS IN STEERING HANDLE
- ★ SHOCKLESS HYDRAULIC PLATFORM LIFT WITH EASY FOOT CONTROL

● Think what this means in *safety* for your truckers—lower materials handling costs—and *increased* production efficiency.

WITHOUT STRAINING—TUGGING—PULLING OR EXTRA PUSHING, THE TRUCKER MERELY WALKS THE "TRANSPORTER" TO ELECTRICALLY MOVE A HEAVY OR BULKY LOAD WITH EASE AND SPEED.

The "TRANSPORTER" combines an efficient foot operated hydraulic lift system with electric power drive and is designed to serve all industry for economical lifting and transporting of various loads of raw materials and finished products on skid platforms up to 6000 lbs. This new lift truck is ideal for buildings where floor loads and elevators have limited capacity.

The "TRANSPORTER" is the latest development in lift trucks designed by AUTOMATIC engineers, incorporating many labor-aiding features derived from the knowledge gained through thirty-five years' experience in building Electric Industrial Power Trucks, Tractors and Cranes.

Streamlined in appearance—sturdy in construction—dependable and safe in operation, the "TRANSPORTER" is ready to operate at the trucker's command, forward or reverse, with complete brake and speed control. Just a few movements of the handle, a push of the button and away it goes at safe walking speed. Platform lift is just as easy with foot control. The platform lifts and lowers the load through shockless hydraulic action.

You will want to know more about this "TRANSPORTER"—how it operates and what it can do for you. Just fill in the coupon and mail—no obligation.

★ ★ ★

MANUFACTURERS FOR OVER 35 YEARS *Electric Propelled* INDUSTRIAL LIFT TRUCKS

AUTOMATIC TRANSPORTATION COMPANY

DIV. OF THE YALE & TOWNE MFG. CO.

119 W. 87th STREET

CHICAGO, ILLINOIS



AUTOMATIC TRANSPORTATION CO.

119 WEST 87TH ST., CHICAGO, ILL.

Gentlemen: Please furnish complete information on the "TRANSPORTER" without obligation.

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

When inquiring specify CEP4798 . . . see information request blank, pgs. 2-3



TODAY you can't afford "down time" to repair or replace improperly designed and installed linings. Never was it more important to remember: "SEMCO" quality — is real economy.

Stebbins Linings and Tile Tanks:

- Assure clean stocks and uninterrupted production schedules.
- Reduce maintenance and repair costs.

Consult a Stebbins Engineer if you have a lining problem.

SEMCO

Stebbins Engineering and Manufacturing Company
WATERTOWN, NEW YORK

When Inquiring specify CEP4799 — see information request blank, pgs. 2-3



To conserve steel while assuring the highest degree of performance, design your equipment to use lighter gauges of stainless steel with reinforcing structures that assure necessary strength.

Our engineers have had extensive experience in applying the principle of reinforcement to stainless steel processing vessels. Through the knowledge we have gained in fifty years of specializing in the fabrication of alloy processing equipment we can make available to you proved methods for making lighter gauge stainless steel do the work of heavier gauges.

Consult with us for engineering suggestions that will give your equipment high operating efficiency while saving steel for that extra plane or tank for our armed forces.

*Second in a series of advertisements written in the interest of efficient war production.

ALL ORDERS SUBJECT TO GOVERNMENT PRIORITY REGULATIONS

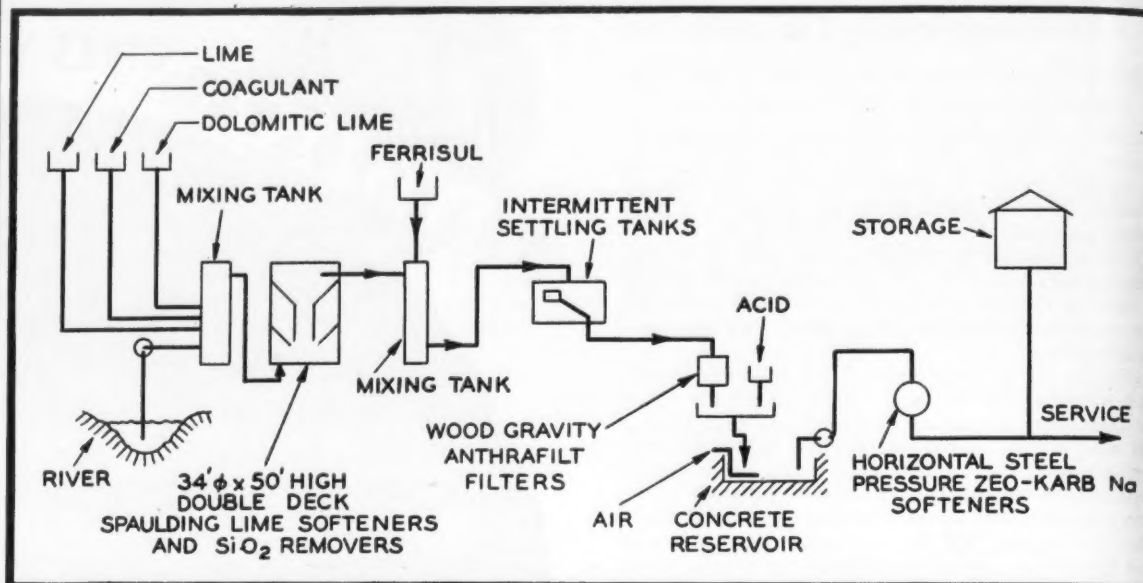
S. BLICKMAN, INC.

605 GREGORY AVE. WEEHAWKEN, N. J.

TANKS • KETTLES • CONDENSERS • AGITATORS • EVAPORATORS • PANS • VATS • CYLINDERS

When Inquiring specify CEP4800 — see information request blank, pgs. 2-3

NEW SOLUTIONS OF PLANT PROBLEMS



PRECIPITATORS shown schematically in magnesia silica removal process plant of public utility

Magnesia Process Removes Silica With No Dissolved Solid Increase

Dolomitic lime, efficient source of MgO; sludge concentration necessary provided by precipitators

Problem — Utility company on Mississippi river was faced with problem of increasing efficiency and reducing costs of silica removal. Ferric sulphate process had been used for some years but was not entirely satisfactory from the standpoint of cost and the excessive increase in total dissolved solids. In connection with silica removal efficient softening of water by lime was desired.

Solution — When process involving a better absorbent, magnesium oxide, was introduced, the utility company after test for its particular requirements adopted it. The application of the process involves the following data: analysis of water, boiler pressure and design and maximum allowable total solids in the concentrated boiler saline, allowable SiO_2 in this saline, temperature at which this treatment is to take place. Dividing the total solids in the boiler saline by the allowable total solids in the treated feed water gives total concentrations. Dividing the allowable SiO_2 by this figure affords the amount of SiO_2 in the treated water. In the case of the utility company the silica and carbonate hardness reduction takes place in special precipitators. Study in connection with the system employing magnesium oxide indicated that efficiency increased with concentration of retained MgO or $\text{Mg}(\text{OH})_2$ sludge in contact with the water. Due to exceedingly intimate and prolonged contact with suspended concentrated sludge in the sludge filter of the precipitator the absorbent effects a very efficient removal of the silica with a minimum dosage of absorbent. The chemicals added are 40 - 50 ppm. of dolomitic lime and 120 ppm. of high calcium lime, (CaO), (see illustration.). The silica present in the raw water is 6 to 8 ppm. The precipitator effluent after treatment contains 2 to 3 ppm. SiO_2 . The water temperature varies from 55 degrees to 85 de-

grees F. The flow rate at the plant is 3,000 to 4,000 gpm. The effluent from the precipitators is given a polishing treatment with ferric sulphate for further clarification and additional reduction of the SiO_2 down to 1.0 to 1.5 ppm. Both of the reaction products obtained by the procedure outlined are relatively insoluble and thus the dissolving and precipitation of this Mg takes place without leaving any salts in solution, i. e., without increasing the total dissolved solids. Efficiency increases with concentration of retained MgO or $\text{Mg}(\text{OH})_2$ sludge in contact with the water. This high concentration is made possible by the precipitator. The contamination of the retained concentrated sludge by the SiO_2 must be kept within definite limits and therefore certain ratios of fresh MgO added to the SiO_2 removed are to be observed.

Results — Reduction of SiO_2 achieved more than adequate and without increasing the dissolved solids. Use of special dolomitic lime as source of MgO accomplished the desired softening of the water by lime.

PERMUTIT CO., Dept. CEP, 330 West 42nd St., New York, N. Y.

When Inquiring specify CEP4801 — see information request blank, pgs. 2-3

Data on the Electrical Resistance of Carbon Black Inks

Eight-page booklet, "The Electrical Resistance of Carbon Black Inks," presents data based on a study involving five different types of carbon blacks dispersed in a mineral oil news ink vehicle. In approaching this subject the first part of this booklet discusses electrical resistances of carbon blacks, particularly when dispersed in rubber compounds, method of testing and measuring resistances and the variation in resistance of various carbon blacks. The main portion of the material describes the testing methods used and tables and charts relating to the findings. Available on request.

GODFREY L. CABOT INC., Dept. CEP, 77 Franklin St., Boston, Mass.

When Inquiring specify CEP4802 — see information request blank, pgs. 2-3

APPLICATIONS

Diesel Jacket Water Cooled By Evaporative Condensers

Large stationary Diesel engines served by pair of
evaporation units with total cooling capacity
of 4,500,000 Btu per hour



EVAPORATIVE CONDENSORS cool
Diesel jacket water

Problem — The generative equipment in the power plant of a Michigan electric cooperative included two 688 h. p. Diesel engines which required efficient cooling of their jacket water to a constant temperature under all operating conditions.

Solution — After a comprehensive study available methods of cooling the water,

two evaporative condensers of heavily galvanized steel construction were installed. Hot jacket water is circulated through a coil, the external surface of which is wetted with water spray. Fans draw air over the wetted coil, and heat is removed by evaporation of the moisture.

Results—The condensers provide a total cooling capacity of 4,500,000 Btu per hour, cooling 200 GPM of water 20 degrees, or from 150 degrees entering temperature to 130 degrees leaving temperature. Savings have been effected in installation and operating costs, space, water and power.

CARRIER CORP., Dept. CEP, Syracuse, N. Y.

When inquiring specify CEP4803 — see information request blank, pgs. 2-3

Automatic Powered Ventilators

Fourteen catalog pages attached in oversize cover, loose-leaf style contain data and illustrations of powered ventilators. The equipment is especially designed for industrial buildings, particularly those where furnaces, forges, welding tools and other factors create dense smoke. Complete specifications, schematic drawings, performance table and photos of installations are each given interesting presentation. Catalog is available upon request.

POWERMATIC VENTILATOR CO., Dept. CEP, 4019 Prospect Ave., Cleveland, Ohio.

When inquiring specify CEP4804 — see information request blank, pgs. 2-3

Rubber Lined Drums for Corrosives

New catalog pages describe and illustrate drums lined with rubber by the "Vulcalock" process which is designed to provide linings resistant to inorganic acids (except strong oxidizing agents such as nitric, chromic and concentrated sulphur), inorganic salts and alkalis. Construction features, service ranges and other essential data are furnished. Catalog section 9030 available on request.

B. F. GOODRICH CO., Dept. CEP, Akron, Ohio.

When inquiring specify CEP4805 — see information request blank, pgs. 2-3



IN STEAM TO BUNKER C FUEL OIL HEATERS



1 foot of Brown Fintube does the work of
from 4 to 6 feet of plain bare tubes.

IN WATER TO GAS COOLERS



1 foot of Brown Fintube does the work of
from 6 to 10 feet of plain bare tubes.

IN QUENCH OIL COOLERS



1 foot of Brown Fintube does the work of
from 4 to 6 feet of plain bare tubes.

IN HYDROCARBON CONDENSERS



1 foot of Brown Fintube does the work of
from 2 to 7 feet of plain bare tubes.

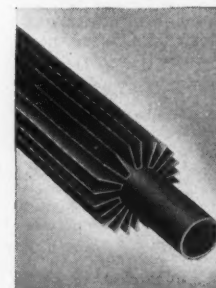
These are 4 examples of how
BROWN *heat transfer* **FINTUBES**
speed the war effort by making
available tubing go further

• And similar savings are possible with a wide variety of other commodities! Through the use of "fins" (made from strip steel of which there is no scarcity) welded integrally on the outside of bare tubing, Brown Fintubes provide a secondary heat transfer surface 6 to 15 times that of bare tubes—permitting the primary and secondary surfaces to be proportioned to the heat transfer co-efficients of the materials being processed. Consequently, with Brown Fintubes a smaller number of tubes or shorter tubes are required for a given service—resulting in great savings of war-scarce tubing, — and less back pressure, less weight, less space, a smaller shell, fewer fittings and many other advantages —

Investigate Brown Fintubes for every heat transfer requirement! They are available in original equipment from most heat exchanger builders, and can be in-

stalled in existing shells with only minor changes to tube sheets, etc.

We solicit your inquiries and will gladly give you the benefit of our experience in selecting fintubes to meet your own commodity, flow, temperature differential, pressure and other conditions. Write today for a fully descriptive folder.



WIDE RANGE OF SIZES

Brown Fintubes are available with any commercial size low carbon steel center tubes from 1/4" to 7" O.D. with from 1/4" to 1 1/2" low carbon steel fins ... with low carbon steel center tubes and 4-6 chrome steel fins; ... and 18-8 chrome nickel steel center tubes with 4-6 chrome, or 18-8 stainless steel fins. Tubes can be lined with copper, zinc, lead or aluminum if desired when corrosive or other special commodities are to be handled within the tube.

THE BROWN FINTUBE CO.

119 FILBERT STREET

ELYRIA, OHIO

—When inquiring specify CEP4806 . . . see information request blank, pgs. 2-3—



A BAKER MATERIAL HANDLING ENGINEER can help you to...

1. Increase Plant Capacity
2. Conserve Man Power
3. Speed Your Deliveries
4. Cut Production Costs
5. Improve Plant Safety
6. Plan Future Material Handling Requirements

All Baker representatives are qualified material handling engineers. They have been in hundreds of plants, and know intimately the problems confronting you wherever materials or finished products are to be moved—in the plant, in the warehouse, on the shipping or receiving platforms, and on shipping piers—they can evaluate your complete handling set-up, and recommend the type of equipment best suited to your plant. If you are after any of the objectives outlined above, it will be well worth your while to seek advice of the Baker representative nearest you.

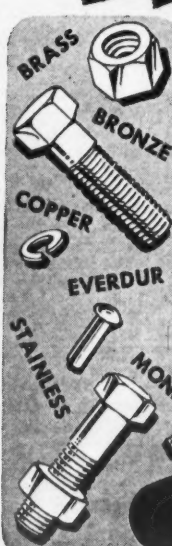
For further information write

BAKER INDUSTRIAL TRUCK DIVISION of the Baker-Raulang Company
2163 WEST 25th STREET • CLEVELAND, OHIO

Baker INDUSTRIAL TRUCKS

When inquiring specify CEP4807 — see information request blank, pgs. 2-3

BOLTS FOR YOU ... Mr. War Manufacturer



Where priorities will allow, Harper can ship non-ferrous, Monel and stainless fastenings. You can "join the Navy" and manufacture of panels, gauges, instruments and scores of other items for Offense, now using Harper products.

4320 STOCK ITEMS

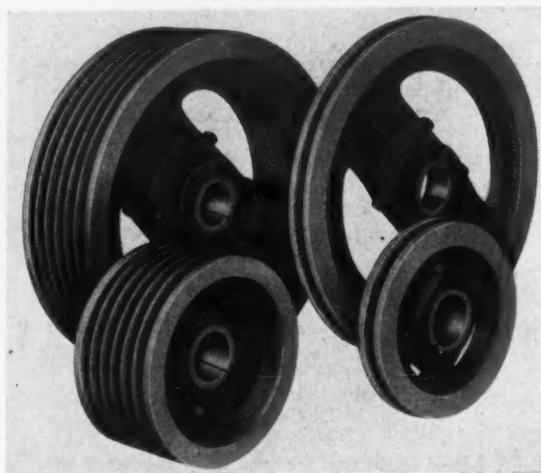
... of non-ferrous, Monel and stainless bolts, nuts, screws, washers, rivets and related items offer a wide choice and reduce necessity of making specials. WRITE FOR CATALOG and reference book—four colors, 80 pages. Harper products now available only to war and most essential industries.

THE H. M. HARPER COMPANY
2644 FLETCHER ST. • CHICAGO

HARPER
Chicago

When inquiring specify CEP4808 — see information request blank, pgs. 2-3

EQUIPMENT FOR PRODUCTION



TYPICAL WOOD SHEAVES . . . highly efficient replacements for metal type

Wood Sheaves for V-Belt Drives Conserve Vital Metals

Highly efficient in all respects except where fly wheel action is essential

Uses — Wood sheaves for V-Belt drives are now offered as an alternate for metal sheaves. The efficiency of this type of sheave compares most favorably in every respect with metal ones except where fly wheel action is essential. In addition to the satisfactory performance and economy of wood sheaves, their use is prompted by the need for metal conservation and the freeing of machinery for necessary war production.

Features — Sheave is of laminated construction and the segments are of straight grain, kiln-dried hard maple. Wood bushings are provided and provision is made for fastening firmly to shaft.

Description — Sheaves are offered in composite groove types for "A" and "B" section belts in full range of sizes, and for "B" belts in sizes from 5.4 P. D. to 38.0 P. D. up to 10 grooves. "C" belts from 5.4 to 44.0 P. D. up to 12 grooves.

DODGE MFG. CORP., Dept. CEP, Mishawaka, Ind

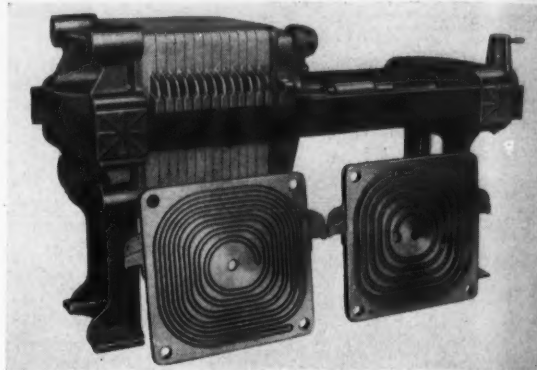
When inquiring specify CEP4809 — see information request blank, pgs. 2-3

Thickener Handles Slow Settling Solids With Speed and Economy

Filters and discharges part of liquid content of slurry without retaining solids in unit

Uses—Adapted to any thickening operation where the objective is the removal from a suspension of any excess liquid. Especially serviceable in thickening, washing or leaching materials which do not readily settle from a suspending liquid. To wash slurries prior to filtration eliminating need of washing filter cake. To obtain clarified solutions without filtration. For continuous catalytic reactions.

Features—No appreciable volume of cake accumulation. Compact, providing large thickening (actually filtering) area in proportion to small space it occupies. Speeds up operations and permits thickened slurry to be fed direct to dryers or other processing equipment. Simplified de-



CONTINUOUS THICKENER . . . with metal plates and frames.

sign and consequent low maintenance cost. Eliminates need for large tank capacity and holding in process large amounts of materials.

Description—Thickener consists of a filter press skeleton carrying special types of plates and frames. Each frame contains spiral groove which starts at one corner of the frame and spirals toward the center where it passes through frame and spirals outward on the other side to a different corner. Thickener plates contain spiral ribs which match the ribs between the grooves of the frame. This construction is used for metal and rubber plates and frames. Wooden frames have wood vertical baffles creating vertical channels feeding from one side of the frame to the other. Wood plates are grooved to function perfectly in connection with frames. Both types are designed to provide velocity channels in frames to insure flushing away of solid deposits on filter medium and prevent cake formation. Assembly, including filter media, is as follows: frame, filter medium, plate, filter medium, frame, filter medium. Slurry passes through channels, filter medium and frame. End of spiral groove in each frame is connected to common discharge channel. Effluent flows to receiving tank or sewer. Bulletin 115 available on request.

T. SHRIVER & CO., Dept. CEP, 810 Hamilton St., Harrison, N. J.

When inquiring specify CEP4810 — see information request blank, pgs. 2-3

Humidifier Needs Little Power

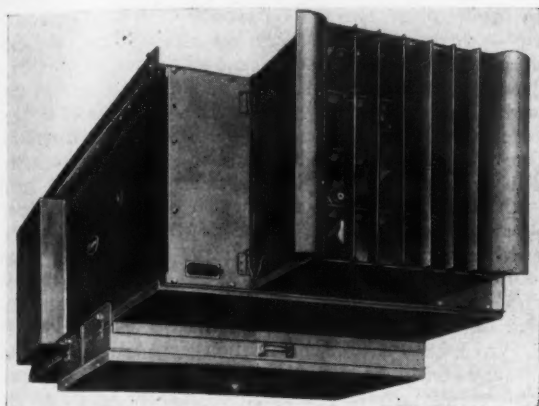
Industrial unit cleans, circulates, heats or cools air; hangs from ceiling; easy to install

Uses — For textile mills, paper and printing plants and other industries where control of humidity is important, or for the storage of hygroscopic materials such as chemicals, leather and other similar products.

Features — Small power consumption provides low cost humidification. Unit is compact, easily installed and ceiling suspended to save floor space. It may be moved readily to accommodate equipment layout changes. Suitable for use in single or multiple installations, the humidifier affords flexibility in case of mill extension or alteration. Besides humidifying the air, it cleans, circulates and heats air during the winter. In summer it may be used to provide evaporative cooling, cleaning and uniform circulation. Is attractive in appearance, rugged in construction, and has all its parts easily accessible for inspection.

Description — Designed as type 43G, this industrial hu-

PRODUCT IMPROVEMENTS



INDUSTRIAL HUMIDIFIER for single or multiple installation

midifier is available in two capacities. They will provide 4800 or 6150 cubic feet of humidified air per minute, and evaporate up to 96 pounds of water per hour. Built in two sections to facilitate handling, the unit includes fan and motor, humidifier pack, heating coil, drip pan, dampers, lint catcher and housing.

CARRIER CORPORATION, Dept. CEP, Syracuse, N. Y.

When inquiring specify CEP4811 — see information request blank, pgs. 2-3

Drum Carrier, 800 Lbs., Capacity Requires Only One Operator

Three wheel construction automatically balances load; vertical lift prevents spilling

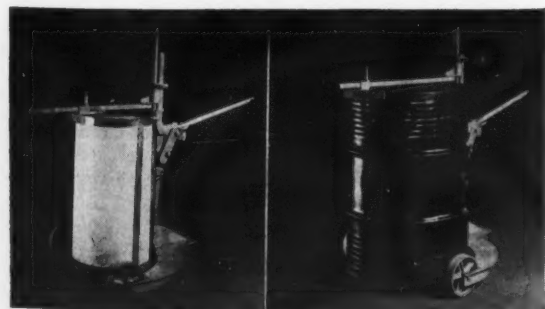
Uses — Carrier is designed to handle light wood, fibre, paper barrels and "one trip" light gauge steel containers with or without chimes. Suitable for moving containers about plant or any general handling.

Features — Three wheel construction automatically balances load for safer and easier handling of containers. Container is lifted several inches off floor by merely attaching clamp and pulling down on handle. The carrier with load can then easily be moved any distance. Vertical lift of container prevents overflow when moving open-head containers.

Description — Capacity, 800 pounds. Will accommodate drums and barrels from 14" to 24" diameters.

ERNST MAGIC CARRIER SALES CO., Dept. CEP, 1456 Jefferson Ave., Buffalo, N. Y.

When inquiring specify CEP4812 — see information request blank, pgs. 2-3



CARRIER EASILY HANDLES A RANGE OF CONTAINERS . . . from small, light weight fibre barrels to drums of 800 lbs.

Conductive Rubber Belting Ends Static Hazards

Discovery converts rubber to conductor; low resistance eliminates danger in event of short circuits

Uses — For use in hazardous areas and in handling materials such as paper, cellophane and many others which carry electrostatic charges.

Features — Low resistance of the material eliminates danger of an electrical connection from one transmission line to another should an accidental short circuit occur.

Performance — Manufacturer states they have been subjected to severe tests at speeds from 100 to 4,000 feet per minute with humidity as low as 16%. When the resistance of these belts ran 100 Megohms no static was indicated on a sensitive gold leaf electroscope.

Description — This non-conductive belting is made possible by a discovery which turns rubber, originally an insulator, into a conductor. Thus, belting made from this substance harmlessly carries off static electricity. Transmission belts are the friction, envelope type. Conveyor belts available are one with 2,500 to 3,000 lb. long wear conductive cover, the other with 1,000 lb. cover. V-belts for fans or hazardous installations are included.

UNITED STATES RUBBER CO., Dept. CEP, Rockefeller Center, New York, N. Y.

When inquiring specify CEP4813 — see information request blank, pgs. 2-3

"LIGHTNIN" MIXERS FOR THE CONTINUOUS PROCESSES GAS ABSORPTION - REACTIONS - CONTACTING - BLENDING

Agitation is important and essential in every continuous process where two or more components are metered together. With all types of proportioning it has been found that placing a mixer in the line improves uniformity. The Mixing Equipment Company tenders its cooperation to both user and builder of proportioning and metering devices with three different types.

RETENTION PERIOD. Any "LIGHTNIN" pressure-vessel-mixer can be utilized for this application. With most materials to be mixed, a vessel is suggested with capacity equal to 2 or 3 times rate of flow in G. P. M. Installed according to our direction there is no short circuiting. Any agitation operation, from a rough wash (Ex. Caustic treating of Naphtha in refinery practice) to intimate mixing can be produced through controllable variables. Economies are based on savings in tankage, pump horsepower (as when orifice plates are used). The uniformity of effluent is of course dependent upon the accuracy of the proportioning system.

"LIGHTNIN" Mixers Are Also Used For Batch

Mixing
Dissolving
Agitating
Suspending Solids
Cooling
Blending

Catalyzing
Emulsifying
Circulating
Leaching
Heating
Washing

Stirring
Contacting
Reacting
Crystallizing
Extracting
Gas Absorption

MIXING EQUIPMENT COMPANY, Inc.

1085 Carson Avenue

Rochester, N. Y.

When inquiring specify CEP4815 . . . see information request blank, pgs. 2-3

FOR the WOMEN

WHO ARE TAKING "THEIR" PLACES



For the Women going into war plants, sanitary washing facilities are needed to prevent loss of production caused by the spreading of skin affections. Physicians say Dermatitis—skin affection—is a common cause of days lost—and recommend

sanitary washing as an important preventive measure.

A Bradley serves 8 to 10 persons simultaneously with clean, running water from a central sprayhead. Water and space are saved—piping and piping connections reduced, because each Bradley takes the place of 8 to 10 conventional "single-person" wash basins. The bowl and pedestal are of stone or marble for long life and the conserving of critical metals. . . Write for "Picture Book of Installations" today. . . BRADLEY WASHFOUNTAIN CO., 2257 W. Michigan Street, Milwaukee, Wisconsin.

BRADLEY
washfountains



When inquiring specify CEP4814 — see information request blank, pgs. 2-3



PROPELLER
TYPE

TURBINE
TYPE

PRIORITIES

Prompt delivery on all machines and parts of bronze, stainless or Monel with A-1-K minimum priority.



KIRK & BLUM Industrial OVENS

These six ovens pictured above were designed and installed in a finishing department to meet the specific requirements of the manufacturer's processes.

Kirk & Blum Ovens meet the demands for increased speed of production, improved finishes, reduction in fuel and labor costs, and assured safety.

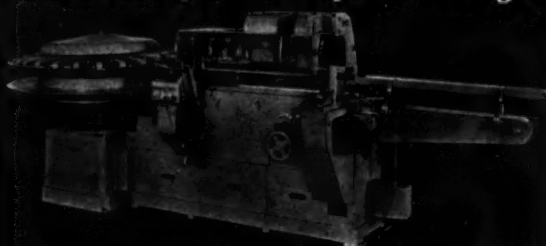
Our Staff of Engineers, with a background of more than a third of a century of specialized experience, can design industrial ovens to meet your particular requirements.

Send for Booklet "Industrial Ovens"

THE KIRK & BLUM MFG. COMPANY
2833 Spring Grove Avenue, CINCINNATI, O.

When inquiring specify CEP4816 — see information request blank, pgs. 2-3

SEALTITE The Modern Automatic Sealer for Paper Bags



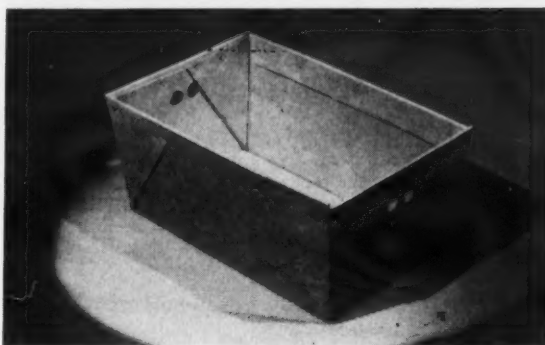
Saves labor and cuts costs. Uses any standard intuck or gusseted paper bag. Delivers a tight, sift-proof, attractive package. Handles 2 lb. to 10 lb. bags.

Fast, dependable, economical.

CONSOLIDATED
PACKAGING MACHINERY CORP.
1400 WEST AVENUE BUFFALO, N. Y.

When inquiring specify CEP4817 — see information request blank, pgs. 2-3

EQUIPMENT FOR PRODUCTION



TOTE BOXES . . can be made of corrugated board in a variety of shapes and sizes

Low Cost Corrugated Tote Boxes

Replacement for metal type is lighter, cheaper

Uses — For handling numerous small parts or units at assembly lines, between departments or in storage. Wide adoption increases handling speed and efficiency. Frees metals for more vital needs.

Features — Lighter weight for easy handling. Safety design, no sharp edges or splinters. Low cost makes practical their use in quantities wherever needed.

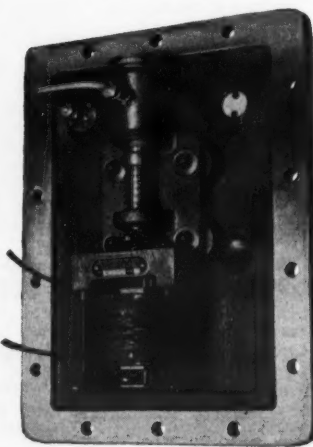
Description — These corrugated tote boxes are made in a number of basic styles already established by use of various manufacturers as covering the majority of requirements. Adaptability of corrugated board, however, makes design and production of boxes, trays and bins to meet special requirements relatively simple.

HINDE & DAUCH PAPER CO., Dept. CEP, Sandusky, Ohio.

When inquiring specify CEP4818 — see information request blank, pgs. 2-3

Solenoid-Operated Lubricators

Solenoid assures close control over each metered unit, which delivers regularly correct amount of oil



LUBRICATOR PUMP mounted on cover plate; easily accessible

Uses — For use in connection with centralized automatic lubricating systems. Particularly adapted for use with machine tools.

Features — Solenoid operated lubricator can be installed for semi-isolated units of special machines. Predetermined and correctly proportioned quantity of oil feed to bearing surfaces. Solenoid operated lubricator pump easily accessible.

Description — An application of the solenoid operated type of automatic lubricator is illustrated in its use with a

roto-mill used for facing the ends of tractor crankcases. In the machining, the tractor crankcase is mounted in chucks on the spindles. The milling cutters — which are rotating — advance to the work, make a plunge cut, and the work then begins to rotate on its own centers. Operation, therefore is similar to straddle milling, except that the work rotates instead of moving across the face of the cutter as in a conventional set-up. The system described here is comprised of a pump and reservoir unit, together with branched oil feed line, junctions and metered units at the bearing surfaces. The system operates as follows: A switch is connected to one of the machine slides, which energizes the solenoid on the return stroke after completely machining the work. At the end of the return stroke, the current to the solenoid is automatically shut off, the lubricator pump piston descends and oil is delivered through the distribution feed line tubing to the eight meter-units. Each meter unit feeds a predetermined and correctly proportioned quantity of oil to the bearing surface it serves, this metered quantity being fed to the slides from below in the conventional manner. In other words the lubricator is operated once for each cycle of the machine or for each part completed. Where semi-isolated units of a special machine are to be lubricated it may be desirable to locate a solenoid operated lubricator in each such unit. System is adaptable to any machine layout. Meter units can be located at any distance, height, or level in relation to lubricator position.

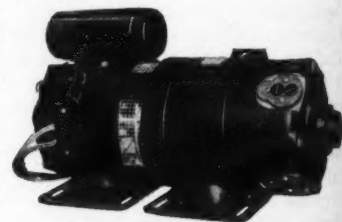
BIJUR LUBRICATING CORP., Dept. CEP, 17-43 Long Island City, N. Y.

When inquiring specify CEP4819 — see information request blank, pgs. 2-3

Generator Regulates Speed Changes

Amplifies every change in power input; responds almost instantaneously; simplifies speed control; cuts costs

Uses — For responsive, accurate control of speed with elimination of several pieces of heretofore necessary equipment. In paper making, this amplidyne generator is used for the control of super calenders, wet-end



AMPLIDYNE GENERATOR . . .

instantaneous speed control drives on cylinder machines, side registers on winders, bag machines and, in conjunction with photoelectric equipment, to maintain exact register of paper moving rapidly through rewinding machines. This system may be applied to many other industrial processes as well.

Features — Introduces unusual simplicity into speed regulating equipment, eliminating apparatus necessary with other types of control. There is no perceptible time lag between adjustment of the amplidyne generator control by the operator and response of its output; response is almost instantaneous. Because of this sensitivity and absence of inertia, unusually accurate control is possible. The number of speed changes thus is negligible and, in paper making, breaks are minimized.

Operation — Just as certain vacuum tubes, through the control of minute amounts of electric power, can control the flow of large amounts of power in other electric equipment, so the amplidyne generator can amplify, hun-

PRODUCTION

dreds or even thousands of times, the variations in the power impressed upon it. Thus, when the device is used as a means of excitation for large generating apparatus, one watt of electric power can be used to control many kilowatts.

Description — Similar in appearance to an electric motor or generator, the amplidyne generator is really a control device. It works in a manner similar to a d-c generator coupled to, and excited from a die exciter . . . but with a higher speed of response and a large amplification. It consists essentially of a conventional direct-current generator with its output brushes short-circuited to produce a powerful magnetizing field in the armature at right angles to the main field. This cross magnetization produces a voltage between a second set of brushes located at right angles to the short-circuited brushes, from which the amplified output is supplied. The first stage of amplification is between the main field and the short circuited brushes, corresponding to the exciter; and the second stage of amplification, corresponding to the generator, is between the short-circuited brushes and the brushes at right angles. Each of these stages can have an amplification of 100 to 1, which produces an all-over amplification of 10,000 to 1.

GENERAL ELECTRIC, Dept. CEP, Schenectady, N. Y.

When inquiring specify CEP4820 — see information request blank, pgs. 2-3

Compound For Speedy Glazing

Workable as putty, requires no priming, used on treated sash; minimum shrinkage

Uses — Designed for glazing work where speed and exceptional adhesion are required.

Features — No priming needed. Works well on treated sash. Handles with ease of putty. No cracking.

Description — Designed to combine the properties of fine glazing compounds with the workability of ordinary putty. This glazing compound is said by the manufacturer to have splendid qualities of adhesion, rapid setting and uniformity. Material is known as "Super-Speed Perma Glaze."

THE BIDDLE CO., Dept. CEP, St. Louis, Mo.

When inquiring specify CEP4821 — see information request blank, pgs. 2-3

Solution Prepares Surfaces For Rust-Resistant Coatings

Enables coatings to gain maximum adhesion; easily applied by brushing or dipping

Uses — Designed primarily for the cleaning and preparation of metal surfaces before the application of corrosion-resistant paints and coatings and also for the purpose of preventing further rust formation. Also facilitates the handling of iron or steel after long exposure or storage prior to being used for fabrication.

Features — Easily applied by either brushing or dipping. Removes surface contamination, scale and rust.

Description — The product is a rust-proofing and metal cleaning solution. It produces a mild etch over metal surfaces, resulting in the development of a chemically adherent inorganic base over which lacquers and coatings are made to gain their maximum adhesion.

U. S. STONEWARE CO., Dept. CEP, 60 E. 42nd St., New York, N. Y.

When inquiring specify CEP4822 — see information request blank, pgs. 2-3

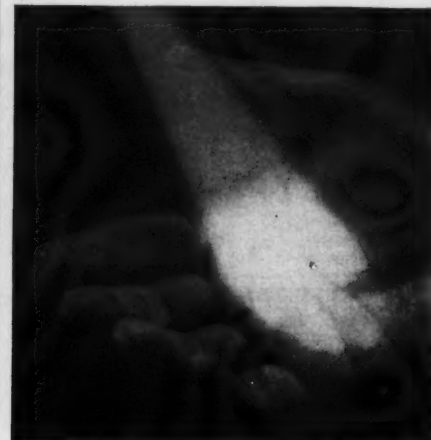
Why G-E Fluorescent Lamps "stay brighter longer"

A PICTURE STORY THAT'S WORTH READING. You want as much light for your money as you can get . . . to help speed war production, reduce waste; and avoid accidents.

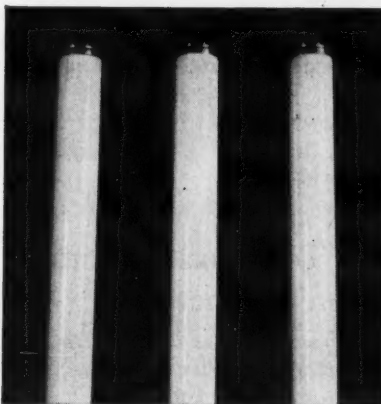
Here are just a few of the reasons G-E MAZDA F lamps are better today than ever before—why they give such dependable service—why they stay brighter longer.



1 DR. W. A. ROBERTS OF G-E LAMP DEVELOPMENT LABORATORY is studying the synthetic phosphors used in coating G-E MAZDA Fluorescent lamps to make them *stay brighter longer*. Up to June 1, General Electric had put approximately 450,000 man-hours of research into Fluorescent lamp improvements with the objective of giving the user more and more light for less and less cost.



2 A TINY DROP OF MERCURY like this is accurately measured and safely injected into G-E MAZDA F lamps by an automatic machine specially designed by G-E engineers. Results: lower cost and improved operation.



3 UNRETouched PHOTO of 3 40-watt G-E MAZDA F lamps. One is brand new, second has burned 2030 hours, third has burned 2650 hours (150 hours over rated life). Note absence of end-blackening.



4 GREATER COLOR UNIFORMITY is assured when controlled and checked by "electric eyes" with color filters . . . one of many routine checks in General Electric's Fluorescent lamp factories.

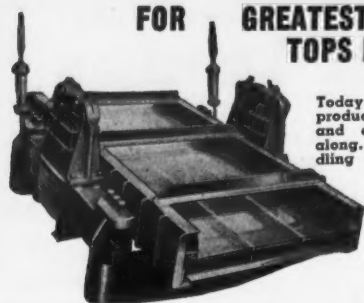


5 WHEN YOU BUY fluorescent lamps, look for the G-E monogram. It means they *stay brighter longer*. For best results it is advisable that you always use certified lighting equipment.



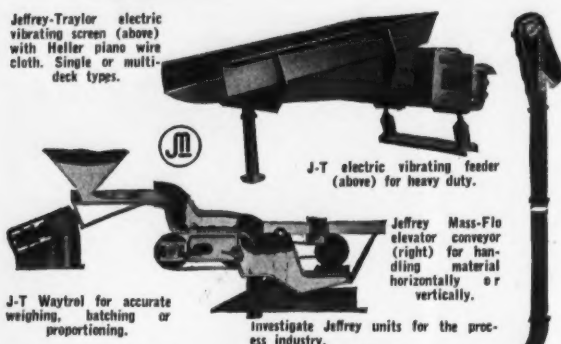
When inquiring specify CEP4823 . . . see information request blank, pgs. 2-3

FOR GREATEST EFFICIENCY TOPS IN PRODUCTION



Jeffrey-Traylor electric vibrating screen (above) with Heller piano wire cloth. Single or multi-deck types.

Today the cry is for greater production — keep material and equipment moving right along. You can maintain handling efficiency and keep production rolling for war needs with Jeffrey equipment... a complete line of improved units for conveying, screening, elevating, weighing and feeding all classes of material.



J-T electric vibrating feeder (above) for heavy duty.

Jeffrey Mass-Flow elevator conveyor (right) for handling material horizontally or vertically.

J-T Waytrol for accurate weighing, batching or proportioning.

Investigate Jeffrey units for the process industry.

THE JEFFREY MFG. CO.

853-99 North Fourth Street, Columbus, Ohio

Baltimore
Birmingham
Boston
Buffalo
Chicago

Cincinnati
Cleveland
Denver
Detroit
Harlan, Ky.

Houston
Huntington
Milwaukee
New York
Philadelphia

St. Louis
Pittsburgh
Salt Lake City
Scranton

When inquiring specify CEP4824 — see information request blank, pgs. 2-3

Stop Human Errors with TOLEDO PRINTWEIGH SCALES



★ **HUMAN** errors in reading, remembering and recording weight figures defy discovery. Your weight records must be right every time... **OR YOU LOSE!** Today Toledo Printweigh solves this problem with automatic printed weight records... available in all models. Send now for new literature. Toledo Scale Company, Toledo, O.

Direct PRINTING OF
TOLEDO Accurate WEIGHTS
IN BIG FIGURES

675
368

When inquiring specify CEP4825 — see information request blank, pgs. 2-3

PRODUCTION

Duplex Pumping Unit

Quiet operation, no chatter; compact unit mounted on common bed-plate

Uses — Developed for use in bulk stations, blending plants and refineries, pump has many other industrial applications including handling naphtha, tar, printing inks, and similar liquids and semi-solids. Specially adapted where two different liquids are to be handled by the same pumping unit or where temporary higher capacity is required.

Features — Unit is extremely quiet — no chatter — even when used with pre-set meters and quick closing valves. Flexible unit permits operation as a single unit or both pumps may be operated together. Streamlined inlet chamber permits handling liquids of greater viscosity without any lowering of volumetric efficiencies. Built-in relief valves (optional equipment) will handle full capacity of pumps without shock or end-thrust on working parts of pump.

Description — Pumps, electric motor or gasoline engine, gear case and clutch mechanisms are mounted upon a common bed-plate, making a complete unit of compact size. Capacity is 50 GPM per pump, 100 GPM with pumps operating simultaneously. Pressure: 100 psi. with lubricating liquids; 75 psi. with non-lubricating liquids. Units with operating pressures up to 200 psi. and for capacities to 700 GPM are available. Pumps for 75 lb. to 100 lb. pressures are furnished with double sleeve bearings, which eliminate shaft distortion. Both bearings are sealed against pumpage by ample packing. Pumps for 125 to 300 lb. pressures are equipped with anti-friction bearings, either internal or external, depending upon the service. S. W., Grand Rapids, Mich.

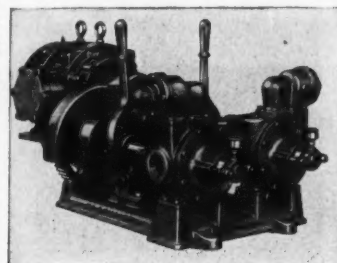
BLACKMER PUMP CO., Dept. CEP, 18411 Century Ave., S. W., Grand Rapids, Mich.

When inquiring specify CEP4826 — see information request blank, pgs. 2-3

Combination Top And Bottom Carton Stitcher

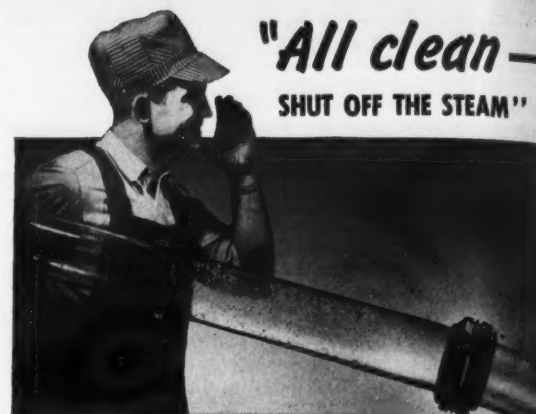
Quickly convertible from one application to the other; forms own staples from standard wire; one movement of operator feeds and staples carton

Uses — For stitching the bottoms of empty shipping containers and the tops of the same containers when packed. **Features** — Quickly converted from one application to the other. When used for sealing carton bottoms, seamless steel feeding post with clincher block in top carries container to stitching point. Dual action of feeding container and driving staple is accomplished by a single thrust of the operator's foot against controls. Machine is converted to top stitcher by attaching sliver arm and replacing post with table on heavy screw post. Table is adjustable to varying box sizes. Packed container is placed on table with sliver arm inserted through opening at end to position under flaps at opposite end. When machine is tripped staple is



DUPLUX PUMPING UNIT
... quiet, no chatter

"All clean — SHUT OFF THE STEAM"



IN pipe lines where cleanliness is essential... where product contamination is a constant hazard... PYREX Piping offers the positive protection of visible cleanliness.

Its low coefficient of expansion makes PYREX Brand Industrial Glass remarkably resistant to thermal shock. PYREX Piping can be flushed, thoroughly and efficiently, with hot water, hot acids or steam. And when the job is done, you know it's done right. You can see that this glass piping is clean, from one end of the line to the other.

PYREX Piping, because it has remarkable resistance to the attacks of all acids and alkalis in solution (except HF), gives your product this added protection against contamination from corrosion.

If production in your plant is being hindered by a piping problem, the answer may be a PYREX Piping installation. A Corning Engineer can help you to decide. Write today to Corning Glass Works, Corning, N. Y.

"PYREX" is a registered trade-mark and indicates manufacture by Corning Glass Works, Corning, N. Y.



When inquiring specify CEP4827 — see information request blank, pgs. 2-3

SEPARATION SAVES VALUES

*In Fish Oil
and Meal*



● This Link-Belt Liquid Screen separates fish meal from oil and water, recovering values in both solids and oil. Liquid is about 90% of volume. Perhaps you, too, can recover values now wasted, create profitable by-products, reduce sewer clogging, stream pollution with this low-cost, modern method. It's easy to learn all about the possibilities of recovering values now tossed away.



SEND FOR THIS FREE FOLDER

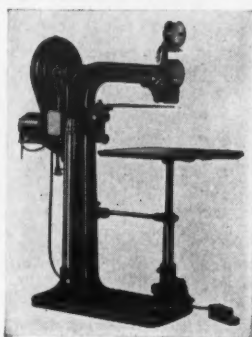
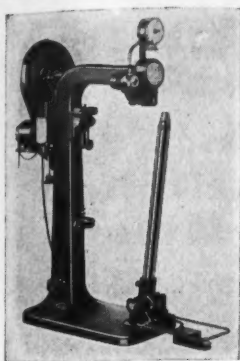
Write today and see how a Link-Belt vibrating screen can solve your waste water problem. Change an expense to a profit—write for your copy of this new folder now! Ask for No. CEP-1877

LINK-BELT COMPANY 8697
2045 W. Hunting Park Ave., Philadelphia

LINK-BELT Vibrating SCREENS

When inquiring specify CEP4828 — see information request blank, pgs. 2-3

PRODUCTION



COMBINATION TOP AND BOTTOM STITCHER

... with feeding post for bottom stitching
... with sliver arm, table for top stitching
formed between clincher block on end of sliver arm and stitching point directly above. Process is repeated to stitch other end, the stitches in end sealed first being spaced to allow insertion of sliver arm to reach other end. Sliver arm is withdrawn when inner and outer flaps of second end are sealed. Top stitcher operated by foot control.

Description—Throat dimension 20". Top stitcher handles containers from 6" to 20" deep and up to 15" square. Capacity of bottom stitcher is from 200 to 800 carton bottoms an hour. Steel wire in standard sizes is used for both operations. Machine forms own staples automatically as it drives them. Parts of simplified stitching head giving heaviest service reversible or instantly replaceable. Variable speed synchronizing.

IDEAL STITCHER & MFG. CO., Dept. CEP, 108 Fourth St., Racine, Wis.

When inquiring specify CEP4829 — see information request blank, pgs. 2-3

Extinguisher For Fire Bombs

Pumps fine water spray in accordance with recommended methods of control



EXTINGUISHER ...
sprays bombs

Uses—Especially adapted to extinguishing incendiary bombs, employing approved principles.

Features—Easily portable, simple operation, tank refillable while in actual use.

Description—Provides the type of fine water spray recommended for extinguishing bomb during its period of activity. Average bomb is said to require about five gallons of water for successful control. This extinguisher made in 2½ and 5 gal. units, the latter size being recommended for general industrial applications. Galvanized steel construction, painted red. Double action pump assures adequate water pressure and gives efficient performance at safe distance. Re-fill opening at top for addition of water during operation if necessary.

BUFFALO APPLIANCE CORP., Dept. CEP, 44 Central Ave., Buffalo, N. Y.

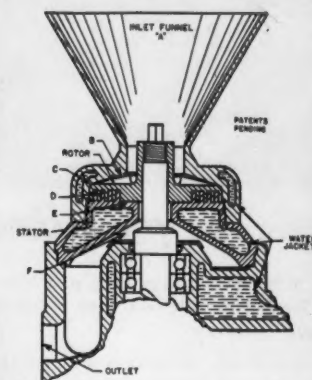
When inquiring specify CEP4830 — see information request blank, pgs. 2-3

GET
BETTER, FINER,
MORE UNIFORM
DISPERSIONS
AND
EMULSIONS
with

BARTLETT-SNOW

Triple Action

COLLOID MILLS



Diagrammatic view showing—"A" the inlet funnel;—"B" the vanes on top of the rotor that pump the material through to the mill—"C" the close clearance between the rotor and the housing where the first processing action takes place;—"D" the interlocking rings on the bottom of the rotor and the top of the stator where the second processing action takes place;—"E" the smooth section between the stator and the rotor where the third processing action takes place;—"F" the chamber leading to the discharge outlet.

● Due to the revolutionary design and structural features diagrammed above, these mills produce better disintegrations, and finer dispersions and emulsions than heretofore had been considered possible on colloid mills.

The gap between the rotor and stator shown at "D" above can be set at any desired adjustment for processing liquids, semi-solids, etc., and the adjustment changed at will while the machine is

running. Stone surfaced, V-grooved, flat machined, and other special types of rotors and stators are available to meet various requirements.

These machines have no hidden corners and employ no packing. All working parts can be removed easily and cleaned thoroughly and quickly. The mills are furnished as illustrated above, or with pipe inlets and outlets when liquids only are to be handled. Four sizes. For additional details, write—

THE C. O. BARTLETT & SNOW CO.
6241 HARVARD AVENUE
CLEVELAND, OHIO

MANUFACTURERS OF PROCESSING EQUIPMENT SINCE 1885

When inquiring specify CEP4831 . . . see information request blank, pgs. 2-3

This is what ACID does....



.....to your drain pipe

This plant has Duriron pipe and fittings in its chemical lab., but in the cafeteria, ordinary drain pipe was "good enough" until . . .

. . . fruit juices, vinegars and cleaning compounds got in their work and leakage commenced. Then up came the floor, in went Duriron acid-proof pipe, and now a troublesome, unsanitary nuisance is settled forever. Duriron pipe, sinks and floor drains are easily installed and are absolutely impervious to corrosion.

THE DURIRON CO., Inc., DAYTON, OHIO



When inquiring specify CEP4832 — see information request blank, pgs. 2-3

PUT YOUR PRODUCTION ON A GOOD FOOTING

STRONG

one-piece electro-forged steel construction

SAFE

non-slip because of the unique twisted bar

BRIGHT

maximum open area for light and air

CLEAN

no sharp corners to clog, self-cleaning

EASY UPKEEP

simple to maintain, paint reaches entire surface

Send for free paper-weight-size sample

BLAW-KNOX STEEL GRATING

BLAW-KNOX DIVISION of Blaw-Knox Co.
Farmers Bank Bldg., Pittsburgh, Pa.

When inquiring specify CEP4833 — see information request blank, pgs. 2-3

PRODUCTION

Granular Drying Material For Bone Dry Liquids and Gases

Adsorbs water instantly, does not swell, disintegrate or appear wet at end of adsorption cycle

Uses — as a drying agent on a variety of industrial processes requiring bone dry gases and liquids. Also gives economical performance in many installations where a high drying efficiency is not demanded. Natural gas, propane, gasoline, air, nitrogen and carbon dioxide are being successfully dehydrated with this agent. It can be used in breather for storage tanks and electrical transformers, to dehumidify air in air conditioning plants and to dehydrate refrigerants.

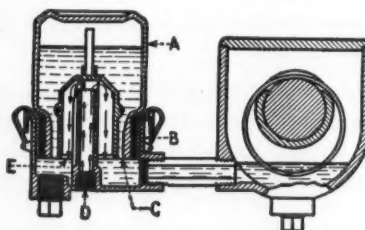
Features — This dessicant material maintains a high drying efficiency under conditions where many materials prove inadequate. It adsorbs water instantly and does not swell, disintegrate or appear wet at the end of an adsorption cycle. Hard, stable, non-corrosive and non-poisonous. Adsorbs 4 to 20% of its weight in water depending on the particular application and is regenerated by heating to 300—350 degrees F. Product known as "Florite."

FLORIDIN CO., Dept. CEP, 127 Liberty St., Warren, Pa.

When inquiring specify CEP4834 — see information request blank, pgs. 2-3

Constant Level Lubricator Has Only Three Simple Parts

Prevents oil waste and damage to material by oil throw



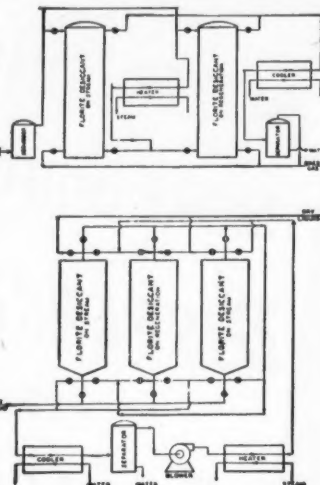
CONSTANT LEVEL LUBRICATOR . . .
automatic — no moving parts

pillow blocks, textile and paper making machinery, pumps, ventilating fans and gear boxes.

Features — Releases automatically the required amount of oil. Simple construction. Prevents oil waste. No moving parts.

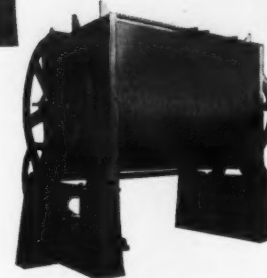
Description — Base is cast of Zamak metal, with an integral open air vent which extends part of the way up into

Uses — To insure adequate lubrication at all times — maintaining a constant pre-determined level of lubricant — prevent oil waste and prevent spoilage of material by oil throw. For electric motors,



DEHYDRATION PLANTS for (top) gases, and (lower) liquids

For FAST, THOROUGH Mixing



use **Porter Ribbon Mixers**

★ Porter Double Ribbon Mixers are versatile. They mix all types of materials ranging from dry powders to heavy, viscous pastes, and they do it quickly and thoroughly. Available in a complete size range, either jacketed or unjacketed. Surfaces which come into contact with mix can be supplied in any metal or alloy. . .

Write for catalog P, describing the complete line of Porter DEPENDABLE Process Equipment.

H. K. PORTER COMPANY, INC.
PITTSBURGH • PENNSYLVANIA

"Where the Famous PORTER LOCOMOTIVES are built"

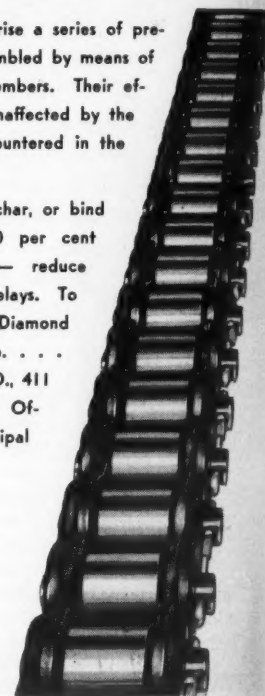
When inquiring specify CEP4835 — see information request blank, pgs. 2-3

Drives That Are Unaffected By Fumes, Dirt, Moisture

DIAMOND Roller Chains comprise a series of precision-made roller bearings assembled by means of high tensile strength tension members. Their effectiveness and efficiency are unaffected by the fumes, dirt, moisture often encountered in the process industries.

They do not slip, creep, swell, char, or bind — they retain practically 100 per cent power-transmitting efficiency — reduce maintenance and replacement delays. To insure top overall output, use Diamond Roller Chains for EVERY drive. . . . DIAMOND CHAIN & MFG. CO., 411 Kentucky Ave., Indianapolis, Ind. Offices and Distributors in All Principal Cities.

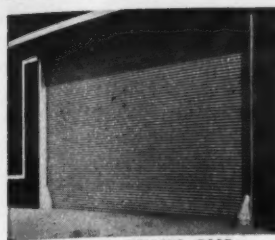
DIAMOND ROLLER CHAINS



When inquiring specify CEP4836 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

DOORS FOR TODAY'S BUILDINGS



KINNEAR ROLLING DOOR



KINNEAR BIFOLD DOOR



KINNEAR RoL-TOP DOOR

To get the fullest measure of door convenience and efficiency needed for today's — and tomorrow's — faster commercial and industrial pace, install Kinnear Doors. Their smooth, easy upward action saves floor and wall space . . . keeps the doors out of the way, out of reach of damage when open . . . is the most efficient type

IT PAYS TO CALL ON
DOOR SPECIALISTS —
CONSULT KINNEAR!

of door for motor operation . . . protection against theft, windstorms and accidental damage. Kinnear all-metal doors give extra protection against fire, riot and sabotage.

Kinnear Doors are built to fit any opening. Write for complete data today. The Kinnear Manufacturing Co., 2200-50 Fields Ave., Columbus, Ohio.

SAVING WAYS IN DOORWAYS

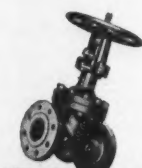
KINNEAR
ROLLING DOORS

When inquiring specify CEP4837 — see information request blank, pgs. 2-3

**Only 4
PARTS!**



Two discs and two wedges — the entire working part assembly of a Darling Double Disc Gate Valve.



**Tighter Seating
Less Wear
Longer Operation
Lower Maintenance**

The seats are parallel. The discs are fully revolving, seating in a different position each time the valve is operated. You get tighter seating, less wear, longer operation and lower maintenance costs with Darling Gate Valves. Any part can be replaced quickly and inexpensively without removing the valve from the line.

Wire or write for
full information

Darling Gate Valves come in Fully Revolving Parallel Seat Double Disc, also in Taper Seat — Slotted and Solid Wedge types. In service pressures up to 3000 pounds they are available in Cast Iron, Bronze, Forged Steel, Cast Steel and Corrosion Resistant Alloys.

DARLING VALVE & MANUFACTURING CO.
WILLIAMSPORT, PA.

When inquiring specify CEP4838 — see information request blank, pgs. 2-3

PRODUCTION

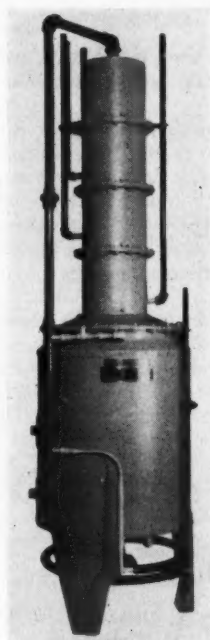
the oil reservoir. Over this vent is fitted loosely an inverted bucket or bell also cast of Zamak metal. The reservoir proper is a glass dome, sealed to a metal collar by plastic porcelain cement which is impervious to acids, oils, water and heat. Two spring clips lock the oil reservoir in position. A felt gasket around the outside of the bell seats against the narrower neck of the glass dome when the reservoir is removed and prevents waste of oil during refilling. When reservoir (A) is filled and inverted into position in base (B), the lower edge (E) of the inverted bucket or bell determines the oil level which the lubricator will maintain. When the level falls below this point, air from vent (D) escapes under the side of the bell as at (C) up to the top of the lubricator permitting oil to flow down until the level to be maintained again seals across the base of the bell. Operation is entirely automatic, employing no moving parts. Available in 2, 4, 8 and 16 Oz. sizes. Outlet tapings provided at both side and bottom of base. Air vent can be provided with filter if desired or can be installed with breather tube connected to hearing.

OIL RITE CORP., Dept. CEP, 3466 So. 13th St., Milwaukee, Wis.

When inquiring specify CEP4839 — see information request blank, pgs. 2-3

Cold Room Air Conditioner Uses Non-Frosting Fluid

Provides constant temperature —50 degrees F. to —80 degrees F.; no corrosion from brine or calcium



COLD ROOM AIR
CONDITIONER
provides constant
temperature

degrees F. without causing ice formation on coolers. The special non-freezing liquid employed is continuously re-concentrated by a unit provided for this purpose.

NIAGARA BLOWER CO., Dept. CEP, 6 E. 45th St., New York, N. Y.

When inquiring specify CEP4840 — see information request blank, pgs. 2-3

Package and Weigh in One Operation

Here is an EXACT WEIGHT Scale built expressly for fast packaging from 20 to 53 pounds. This unit is rugged, works anywhere it is placed regardless of the floor level and is accurate to the ounce under full carrying load of 53 pounds. Dials are placed in the top . . . are visible from any angle for floor and low bench operations. Weights are covered with dust cover to avoid error from foreign matter. Dashpots are offset for easy removal and cleaning. It's the most popular check-weighing equipment in its capacity class . . . now in use in more than 53 major American Industries.



EXACT WEIGHT Scale Model 1038. For fast, accurate bag and carton weighing; equipped with carrying handles for easy portability requires no leveling for uneven floors or low benches; top reading dials graduated 8 ozs. over and underweight. Sensitive to 1 oz.—Capacity to 53 lbs.

Write for complete specifications for chemical processing operations. Do it today!

THE EXACT WEIGHT SCALE CO.

31 W. Fifth Ave.

Columbus, Ohio

THERE IS NO SUBSTITUTE FOR EXACT WEIGHT

When inquiring specify CEP4841 — see information request blank, pgs. 2-3

JESSOP Silver-Ply*
STAINLESS-CLAD STEEL for
*Synthetic Rubber
Equipment*

Jessop Silver-Ply Stainless-Clad Steel is now safeguarding compounds in synthetic rubber equipment during vital processing stages.

Silver-Ply Stainless-Clad Steel consists of a layer of stainless steel (usually 20% of ultimate thickness), inseparably combined with a backing of mild steel. It offers the acid resisting properties of solid stainless on the clad side and 20% clad actually conserves 80% of critical chrome and nickel. Jessop's Engineering Department will be glad to consult with you regarding use of stainless-clad steel, to overcome problems of corrosion and contamination. *Manufactured under U. S. Pat. Nos. 1,997,538 and 2,044,742.



Jessop Steel Company
WASHINGTON, PENNA., U. S. A.

JESSOP STEELS FOR AMERICA AND HER ALLIES

CARBON • HIGH SPEED • SPECIAL ALLOY • STAINLESS • COMPOSITE STEELS

When inquiring specify CEP4842 — see information request blank, pgs. 2-3



with efficient automatic STANDARD ELECTRIC STOP CLOCKS

Standard Electric Time Clocks efficiently meet today's need for **FASTER** yet consistently accurate precision timing. Simple to use — large, easy-to-read dial — automatic control eliminates human error. Several models, ranging in measurement intervals from .01 second to one hour. Rugged, trouble-proof construction. Details on request.

THE STANDARD ELECTRIC TIME COMPANY
69 Logan St., Springfield, Mass. Branch Offices in Principal Cities
"STANDARD MAKES EVERY SPLIT-SECOND COUNT"

When inquiring specify CEP4843 — see information request blank, pgs. 2-3

INSTRUMENTS OF CONTROL



PHOTO-ELECTRIC ALARM . . . for outdoor and indoor use
. . . completely surrounds large area

Long Range Photo-Electric Alarm For Outdoor and Indoor Use

Installations can completely surround large areas requiring protection; designed for 24 hour service

Uses: To provide long range burglar alarm protection completely around factories, power plants and other vital areas.

Features: Special unit latches alarm in operation, once the light beam has been momentarily broken, until the reset button is operated.

Description: Light source projects a practically invisible light beam for a distance of 350 to 700 feet. Installations of this equipment makes it possible to completely surround large areas. If the light beam is broken by intruders, the photo-electric contacts close, thereby sounding alarms, operating a central station system, closing gates, turning on flood lights or putting other protective measures into action. Control is provided with latching unit, including a push button station which may be located at any convenient point. Photoswitch is unaffected by changes in local light and is designed for 24 hours operation. Relay contacts are pure silver and will handle 15 amps. A. C. and 8 amps. D. C. Control operates from 115 volts A. C. source of supply.

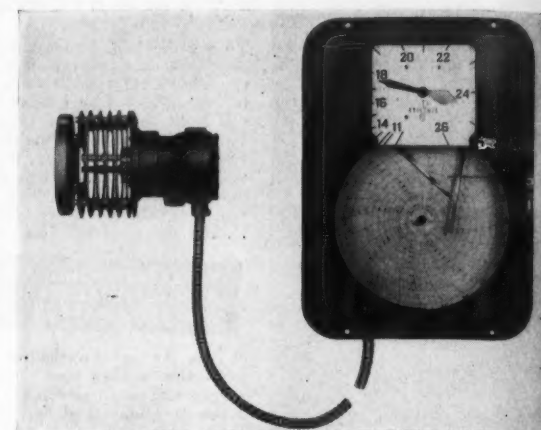
PHOTOSWITCH INC., Dept. CEP, 21 Chestnut St., Cambridge, Mass.

When inquiring specify CEP4844 — see information request blank, pgs. 2-3

Radiation Pyrometer

Designed for service where kiln and furnace temperature exceed 900 degrees F.

Uses — A new radiation pyrometer has been designed for recording, indicating or automatically controlling temperatures in furnaces and kilns above 900 degrees F. Included in these are high temperatures out of the range of the thermocouple, temperatures for which rare metal thermocouples are used, surface temperatures such as roof, wall, duct, lining or retort temperature. Also the temperatures of the work itself rather than furnace or kiln temperature surrounding the work. Finally where object is moving, is inaccessible or where there are space limitations.



PRYOMETER FOR MOUNTING outside of furnace or hot zone

Features—The temperature sensitive unit or radiation head is mounted on the outside of the furnace or hot zone where it picks up heat rays emitted from the object under measurement thus registering its surface temperature.

THE BRISTOL CO., Dept. CEP, Waterbury, Conn.

When inquiring specify CEP4845 — see information request blank, pgs. 2-3

Forced Draft Laboratory Ovens

Four-page bulletin on laboratory test ovens designed for chemical and analytical work such as test baking and drying of paints and lacquers, drying of solvents from compounds; for aging, curing, sterilizing glassware and similar objects. Complete specifications of the various models together with chart and description of the heat distribution system employed are given for both electric and gas heated styles. Bulletin 105 sent on request.

DESPATCH OVEN CO., Dept. CEP, Minneapolis, Minn.

When inquiring specify CEP4846 — see information request blank, pgs. 2-3

Sampling in Tanks, Drums or Tank Cars

Two-color, single sheet bulletin, fitted for looseleaf binding, describes two improved models of Bacon Bomb Samplers. Cut-away drawings show details of construction and operation, while the text tells the important features and gives prices. Bulletin is available upon request.

PRECISION SCIENTIFIC CO., Dept. CEP, 1750 N. Springfield, Chicago, Ill.

When inquiring specify CEP4847 — see information request blank, pgs. 2-3

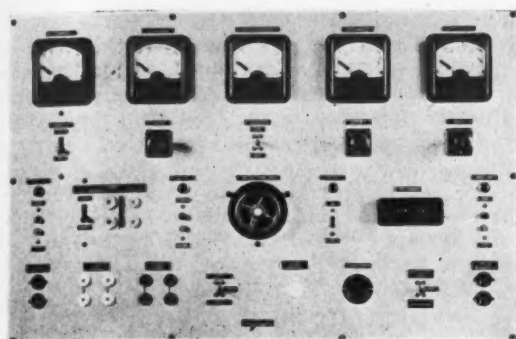
Portable CO₂ Analyzer Detects Fuel Waste; Makes Analysis in 40 Seconds

Attractive; four-page, three-color folder illustrates and describes this instrument for detecting CO₂. Instrument's major features are outlined in detail, and a series of four photographs show how it is used. Features include accuracy, portability, spillproof in any position, ruggedly built, coldweather-proof, and speedy to make analysis in 40 seconds. Descriptive Bulletin 337 is available on request.

BACHARACH INDUSTRIAL INSTRUMENT CO., Dept. CEP, 7000 Bennett St., Pittsburgh, Pa.

When inquiring specify CEP4848 — see information request blank, pgs. 2-3

PRODUCTION ... FOR LABORATORY



TESTING PANEL . . for production testing of electrical equipment

Electrical Testing Panels For Production & Research Work

Provide necessary flexibility for laboratory service; each unit designed to meet individual requirements

Uses: To provide a speedy and efficient method for production testing of all types of electrical equipment.

Features: Provide the flexibility of electrical connections so essential in research in development laboratories.

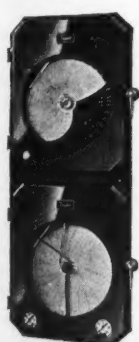
Description: Each panel designed to meet individual requirements, provide simple and convenient operation and are built for heavy duty service. Voltage distribution type installations are also available for cases where a great variety of voltages, cycles and phases are fed to particular test locations from a main centralized board. Panels can be delivered promptly with high priority rating. No catalogs available but inquiries are invited.

STANDARD ELECTRIC TIME CO., Dept. CEP, Springfield, Mass.

When inquiring specify CEP4849 — see information request blank, pgs. 2-3

Controller Can be Adapted to Many Special Requirements

Maintains exact temperatures, levels; interrupter timer permits increase in holding or rising period or both



CONTROLLER meets wide range of requirements

Uses — To maintain exact temperatures, pressures, flows or liquid levels according to a predetermined time schedule.

Features — Cam and chart individually mounted and conveniently located for comparison. After ideal processing schedule has been determined the process may be repeated automatically and precisely as many times as desired.

Description — This new time schedule controller has a friction drive cam assembly which permits rotation of the cam without loosening any locking means. It also has an improved means of resetting one cam without disturbing the other although the instrument has two complete control mechanisms. Each cam is capable of operating from one to four air valves, micro switches or both

for the actuation of any external mechanism such as a valve,

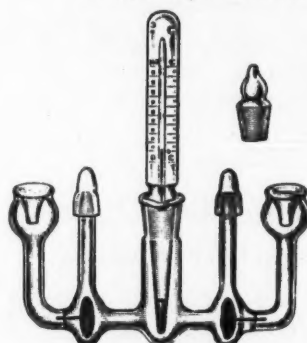
bell or light. This is accomplished automatically in any desired relation of one to the other and the cam automatically returns to starting position. An interrupter is an optional feature which allows extreme flexibility to both the rise and the holding period of the process under control. This timing feature allows the use of a very fast cam clock for rapid rising period but reduces the speed of the clock to increase the length of the holding period. Either or both periods may be increased as much as $6\frac{1}{2}$ times their normal intervals. This interrupter timer is built right in the time schedule controller, eliminating the need for a separate timing controller. This new model is available in all control forms including automatic reset and pre-act. It can be converted to fit any process requirements as they arise by the addition of pre-calibrated assemblies. Universal case for face or flush mounting. For more detailed information ask for Bulletin 99111.

TAYLOR INSTRUMENT COMPANIES, Dept., CEP, Rochester, N. Y.

When inquiring specify CEP4850 — see information request blank, pgs. 2-3

Fill-Type Cell Tests Electrolytes

Determines conductivity by means of mercury and electrodes; thermometer gives reading



FILL-TYPE CONDUCTIVITY CELL . . . uses mercury electrodes

in the electrolyte for temperature readings. Accurate positioning of the electrodes in contact with the electrolyte is assured by the rigid construction employed.

Description — Known as the "CEL-3" fill-type conductivity cell, it has a constant of approximately 15. It is constructed of resistance glass, and has platinum electrodes.

INDUSTRIAL INSTRUMENTS, INC., Dept. CEP, 156 Culver St., Jersey City, N. J.

When inquiring specify CEP4851 — see information request blank, pgs. 2-3

Wiring Tools and Accessories

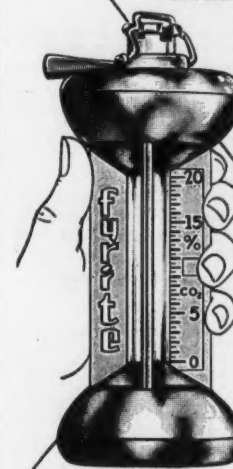
Four page bulletin presents in catalog style complete information concerning a number of wiring tools and accessories. In addition to a molded shell "wire nut" for making wiring joints, other items include cable reels, wire strippers, lugs, switchbox supports, fuse pullers and reducers, soldering tools and fuse clip clamps. Bulletin available on request.

IDEAL COMMUTATOR DRESSER CO., Dept. CEP, 1279 Park Ave., Sycamore, Ill.

When inquiring specify CEP4852 — see information request blank, pgs. 2-3

SIMPLIFIED CO₂ ANALYZER

**MAKES ACCURATE
FLUE GAS TESTS
EASY**



The Fyrite "Orsat" Analyzer is an outstanding example of modern instrument design. Accuracy within $\frac{1}{2}$ of 1% CO₂. Complete analysis in 40 seconds. Conveniently held in the hand while analysis is taken. Spill-proof in any position. Rugged, durable, compact. More than 7000 in use.

RETURN COUPON BELOW. Obtain literature on Fyrite and learn how to get immediate delivery under priority regulations.

SEND DATA ON FYRITE "ORSAT"

Name _____
Address _____
City _____ State _____

COMPLETE with Industrial Type Flue Filter

BACHARACH
Industrial Instrument Co.
7000 BENNETT ST.
PITTSBURGH, PA.

When inquiring specify CEP4853 — see information request blank, pgs. 2-3



Ariens Corp.

Says: "No more wet air troubles for us."

An Aridifier installed on their compressed air lines shut out moisture, dirt and fine scale that had been causing trouble, running up maintenance costs on air tools and air controls and causing blemishes on sprayed finishes in the plant of The Ariens Corp., Brillion, Wisc., makers of power cultivators for florists, estates and truck gardeners.

Aridifiers will end troubles and high maintenance costs arising from condensation and dirt in compressed air lines in your plant, too. Fully automatic—no filters or baffles—nothing to clean or replace—operates by centrifugal force alone—4-vaned ball bearing rotors effect removal with 92% efficiency, tests show. Thousands in use. Send for complete facts in Bulletin 639.



Logan Engineering Company
4900 Lawrence Avenue, Chicago, Illinois

(The) ARIDIFIER
Dries and Cleans Compressed Air

When inquiring specify CEP4854 — see information request blank, pgs. 2-3

LEVEL CONTROL

for CONDUCTIVE AND NON CONDUCTIVE FLUIDS

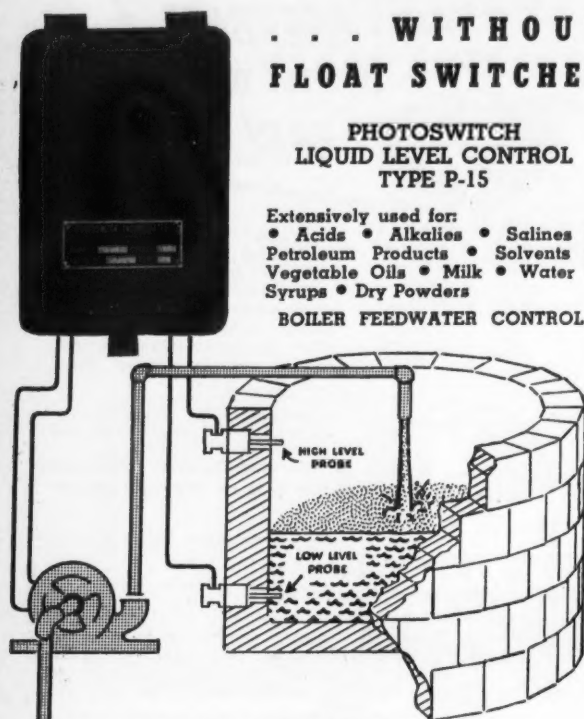
... WITHOUT
FLOAT SWITCHES

PHOTOSWITCH LIQUID LEVEL CONTROL TYPE P-15

Extensively used for:

- Acids • Alkalies • Salines •
- Petroleum Products • Solvents •
- Vegetable Oils • Milk • Water •
- Syrups • Dry Powders

BOILER FEEDWATER CONTROL



HOW IT OPERATES . .

PHOTOSWITCH probes or electrodes are attached to tank at levels representing low point where pumping starts, and high level where pumping stops. These probes are wired to Electronic Level Control. When liquid level falls below probes, Level Control starts pump and tank fills. When level rises to upper probe, the fluid itself acts as a conductor of the small amount of current required for the operation of Level Control which stops pump. Even when used with non-conductive fluids, probe circuit carries only milliamperes of current and low voltage.

Rugged • Low In Cost • Guaranteed

- Control for any liquid
- Used with explosives fluids
- Installation cost negligible
- No Mechanical Parts

Send

This Coupon for Bulletin C-1100

Name..... Title.....

Company.....

Address.....

City..... State.....

PHOTOELECTRIC AND ELECTRONIC CONTROLS FOR ALL INDUSTRIAL PURPOSES



PHOTOSWITCH INCORPORATED
CAMBRIDGE • MASSACHUSETTS

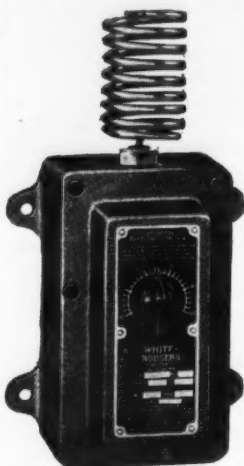
District offices in all principal cities

When inquiring specify CEP4855 — see information request blank, pgs. 2-3

INSTRUMENTS OF CONTROL

Explosion-Proof Thermostats

For heating, air conditioning and refrigerating installations where hazardous conditions exist



SELF-CONTAINED . . .
explosion-proof
type thermostat

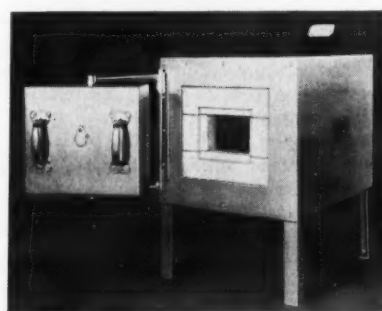
40 degrees to 90 degrees F. Cases are of semi-steel approved by Underwriters' Laboratories. Finished in baked crackle enamel. Tapped for 1/2 in. conduit fitting.

WHITE-RODGERS ELECTRIC CO., Dept. CEP, 1209 Cass Ave., St. Louis, Mo.

When inquiring specify CEP4856 — see information request blank, pgs. 2-3

Full Muffle Electric Box Furnace With All Refractory Hearth

For ceramic and tool room heating applications
up to 2,000 degrees



ELECTRIC FURNACE . . reaches maximum
temperature in less than one hour

maximum temperature obtained in less than one hour. Center pivoted door, less costly than sliding type and prevents exposure to heat of inner door surface.

Description: Full box type muffle and all refractory hearth, completely surrounded by heating elements, eliminating temperature variations in hearth chamber. Quality refractory block, heavy steel casing and frame construction. Furnished in either bench or floor mounting. Chamber dimensions measure 3 3/4 in. high, 5 1/4 in. wide and 12 in. deep. Capacity provided is 3 K. W. Furnished for

Uses — The self-contained and remote bulb type in which these thermostats are available provide protection against explosions and fires. The first is particularly suited for use where temperatures of large air spaces are to be controlled. Second is for controlling temperatures in ducts, walk-in coolers, liquid baths and similar installations.

Description — Both self-contained and remote types are available in standard ranges to cover any type of installation. External knob and tamper-proof internal adjustment available in both fixed and variable differential types. Line includes four self-contained and four remote control models. Temperature range is from

Uses: Designed primarily for fritting and glazing ceramics at temperatures up to 2,000 degrees it is also well adapted to treating high speed tool steels, hardening and other heating applications.

Features: Quick heating, maxi-

120 or 220 volts single phase current. Furnace as illustrated is furnished with indicating pyrometer. Temperature controls provided for either furnace or separate mounting. Temperature ranges up to 2,300 degrees available and various types of doors and hearths for special applications.

H. O. SWOBODA, INC., Dept. CEP, 110 13th St., New Brighton, Pa.

When inquiring specify CEP4857 — see information request blank, pgs. 2-3

Exhaust Gas Tester Simplified Accurate and Adaptable

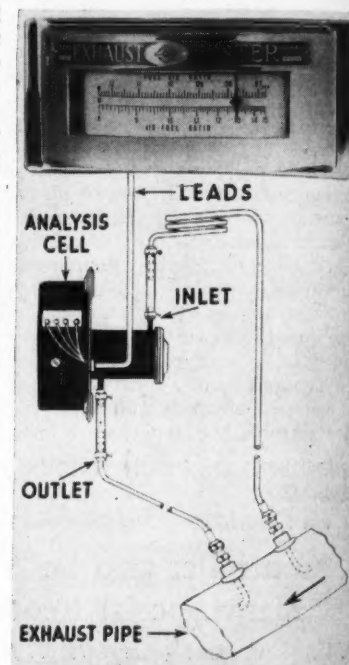
Determines distribution and degree of combustion
by thermal conductivity principle of gas analysis

Uses — Designed and built for test stand use in the aviation and automotive industries. Provides a ready means of making distribution tests and quickly and accurately determining the efficiency with which fuel is being burned in any or all cylinders of an engine under test. All types of internal combustion engines may be tested with it. Results are indicated on an indicator scaled in terms of air-fuel ratio as well as fuel-air ratio.

Description — The complete equipment comprises an indicator having a double scale, 4 1/2" long, reading in fuel-air and air-fuel ratios, together with an aero type analysis cell and all lead wires for connecting the two units in addition to standard installation parts. Operation of the instrument is based on the thermal conductivity principle of gas analysis. Exhaust gas samples from the engine are conducted through tubing to the analysis cell where the thermal conductivity of the gas is measured to determine the completeness of combustion taking place in the engine. The maximum speed of response may be attained by locating the cell closer to the engine under test. Indicator is connected to cell electrically only and is designed for panel mounting. Indicator's zero adjustment is on front of unit. Terminals for connection to analysis cell and for 12-volt current supply are conveniently placed. Several engine manufacturers are using this instrument for distribution tests specifically.

CAMBRIDGE INSTRUMENT CO., Dept. CEP, 3732 Grand Central Terminal, New York, N. Y.

When inquiring specify CEP4858 — see information request blank, pgs. 2-3



EXHAUST TESTER . . . Indicator,
analysis cell and fittings easily assembled

INSTRUMENTS

Pyrometers with High Speed Photoelectric Action

Impressive three-color, 40-page catalog presents a line of Electric thermometers, pyrometers, photoelectrically balanced recorders, indicators, controllers, recording controllers, potentiometers for thermocouples, slide-wire Wheatstone bridges for resistance thermometers. Text cites the advantages claimed for "Celestray" pyrometers and tells how the equipment can be used in many different applications. Two pages of stripped-down photos, with diagrammatic numbers to indicate the parts, show features and specifications. Large and numerous photographs throughout the book show operation, applications and detailed views of the pyrometers. Catalog No. 1101G is available upon request.

C. J. TAGLIABUE MFG. CO., Dept. CEP, Park & Nostrand Aves., Brooklyn, N.Y.

When inquiring specify CEP4859 — see information request blank, pgs. 2-3

Non-Indicating Air Operated Controllers

Two-color, eight-page booklet describes a non-indicating temperature controller of the air operated remote bulb type, which is designed to fulfill the requirements for an inexpensive, non-indicating, non-recording control instrument for the many simple services not demanding indicating or recording instruments. Pictures show the important operating features, constructional details and exterior of the instrument. Also included is a schematic diagram showing a typical application. Drilling and mounting dimensions are given. Booklet No. 77-2 is available upon request.

BROWN INSTRUMENT CO., Dept. CEP, Wayne & Roberts, Philadelphia, Pa.

When inquiring specify CEP4860 — see information request blank, pgs. 2-3

Monographs on Boiler Room Controls

A series of engineering monographs provide detailed and practical information concerning boiler room instrumentation and automatic combustion control. Numbers and subject of some of these are as follows: No. 1, "How Can Steam Pressure Be Controlled?"; No. 2, "Why Operate Automatic Boiler Controls From Changes in Steam Pressure?"; No. 3, "Adapting Automatic Combustion Control to the Characteristics of Underfed Stokers," No's. 4, 5, 6 and 7 present similar discussion in connection with spreader type stokers, chain or traveling grate stokers, pulverizers and oil burners respectively. Available upon request.

HAYS CORP., Dept. CEP, Michigan City, Ind.

When inquiring specify CEP4861 — see information request blank, pgs. 2-3

Watching Smoke With Density Recorders

How to avoid excess smoke and improve boiler efficiency through the use of equipment which records smoke density is explained in a 16-page booklet illustrating and describing the application of such equipment to stacks, breeching or ducts of various sizes. Photos present interesting views of units in actual use and show method of outside mounting of smoke sampler, advantages of which are discussed at length. Practical discussion of numerous installation and operating problems as well as instructions for installing this equipment are given particular attention. Catalog N-93-163 available on request.

LEEDS & NORTHRUP, Dept. CEP, 4907 Stenton Ave., Philadelphia, Pa.

When inquiring specify CEP4862 — see information request blank, pgs. 2-3

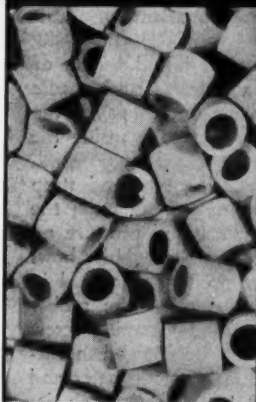
In Processing of Corrosive Liquids . . .

The Shortest Time

from Drafting Board  *to All-Out Production is*

Lapp

Chemical Porcelain



Lapp Raschig Rings bring to tower packing all the advantages of Lapp Chemical Porcelain—iron-free purity, high strength, non-crumbling long service. Most sizes are available from factory stock.

Do you contemplate a plant or a system for the processing of corrosive liquids? If it's in the blue-print stage, it's but a few weeks away from full-scale production, so far as pipe, valves and tower packing are concerned—if the specifications call for Lapp Chemical Porcelain. For this is one material you can still get. All the priority rating we need is enough to cover pipe flanges, valve hardware and other metal parts. Our facilities are adequate to keep well ahead of your plant construction schedule.

When you get into production, you'll find the purity of your product as good—or better—than you could get with any other corrosion-free material. You'll find it will outlast most others, that it continues year-in-and-year-out its "first month" quality of performance. All these things are functions of the material itself—its dense, thoroughly vitrified *non-porous* body, its strength, its completely iron-free purity. May we send you the whole story? Lapp Insulator Co., Inc., Chemical Porcelain Division, LeRoy, N. Y.

Lapp

Chemical Porcelain

Valves • Pipe • Raschig Rings

—When inquiring specify CEP4863 . . . see information request blank, pgs. 2-3—



WHAT'S NEW IN MODERN pH EQUIPMENT? This booklet tells you!

- Lists and describes over 60 different glass electrodes and electrode assemblies for a wide range of applications from industrial process control to specialized research, medical and biological work!
- Illustrates and describes the three basic types of Beckman pH Instruments — Laboratory, Industrial, and Automatic — and accessory equipment for each.
- Also illustrates many other accessory items that increase the speed, convenience, and accuracy of modern pH control!

NO MATTER WHAT TYPE of pH work you are interested in — research, medical, chemical, industrial process control, etc. — you should have this valuable reference booklet at hand for checking the newest equipment available for YOUR particular pH application.

SEND FOR YOUR FREE COPY TODAY. When writing, ask for Beckman Bulletin No. 861

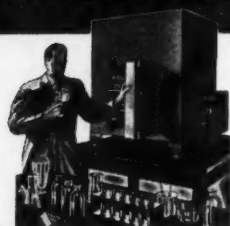
World's Largest Manufacturer of Glass Electrode pH Equipment
NATIONAL TECHNICAL LABORATORIES
 SOUTH PASADENA CALIFORNIA

Beckman THE LEADING NAME IN pH

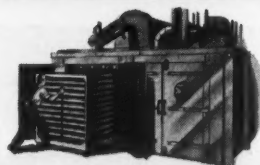
When inquiring specify CEP4864 — see information request blank, pgs. 2-3

DESPATCH CHEMICAL DRYERS WIN VICTORIES OVER TIME

Ovens and dryers designed to speed up the drying time for solvents, powders and solids. Whether for testing or production drying, Despatch recirculating heat can be applied with maximum control in every operation. Investigate Despatch speedy dryers today.



IN THE LABORATORY



IN PRODUCTION

Write for Bulletin No. 105-X for complete information on laboratory ovens. Call for a Despatch engineer to recommend the proper dryer for your production.

DESPATCH OVEN COMPANY
 MINNEAPOLIS MINNESOTA

When inquiring specify CEP4865 — see information request blank, pgs. 2-3

INSTRUMENTS

Sight Feed Bubbler For Liquid Level Gauges and Flow Meters

Two types available; selection of pyrex or plastic bowls for varying pressure requirements



SIGHT FEED BUBBLER . . provides full view of bowl

Uses — This bubbler was primarily designed for the continuous operation of tank liquid level gauges. It has, however, an even wider application where a sight indicator is required — to purge lines (giving visible indication of gas flow), to note the presence of harmful or undesirable gases and use in connection with flow meters for the measurement of corrosive materials, thereby eliminating the problem of satis-

factory sealing fluids.

Operation—Bubbler bowl is filled with liquid. Rate of bubbling is adjusted by means of a stainless steel needle valve at the top of the unit. All air or gas passes the needle valve before entering the bubbler tube inside the bubbler bowl.

Description—Available in two types, ring type and strap type to meet necessary specifications depending upon the application, corrosion resistance necessary and pressure requirements. Ring type (illustrated) has the bubbler bowl fastened to the body by means of a packing ring held in position by six screws. The strap type has the rubber bowl fastened in position by means of a clamping screw at the bottom of the swinging strap. Bubbler when furnished with bowl of molded pyrex, 2 1/4" in diameter and 3 1/2" deep, withstands pressures up to 30 lbs. per sq. in. Plastic bowl available for pressure up to 100 lbs. per sq. in. Metals used are brass or semi-steel. Descriptive Bulletin 21 available upon request.

THE MERIAM CO., Dept. CEP, 1954 West 112th St., Cleveland, Ohio.

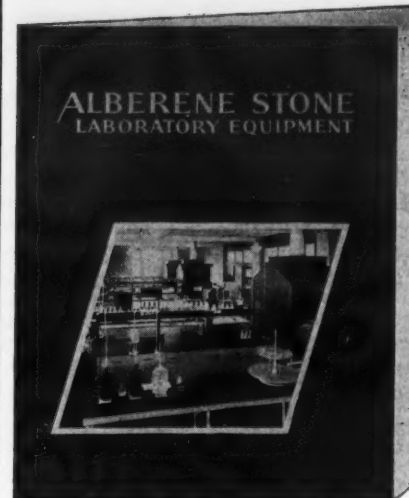
When inquiring specify CEP4866 — see information request blank, pgs. 2-3

Maintaining Constant Furnace Pressure Automatically

Eight-page, two-color bulletin tells "how, why, when and where" this line of furnace pressure controllers can be used to maintain constant furnace pressure automatically. A complete description of the control system is given, and also of the parts that go to make up the system. Large, clear photographs of the units are included, and a schematic diagram shows how the system should be hooked up for operation. Bulletin No. 74-2 is available upon request.

BROWN INSTRUMENT CO., Dept. CEP, Philadelphia, Pa.

When inquiring specify CEP4867 — see information request blank, pgs. 2-3



May
We
Send
You
A
Copy?

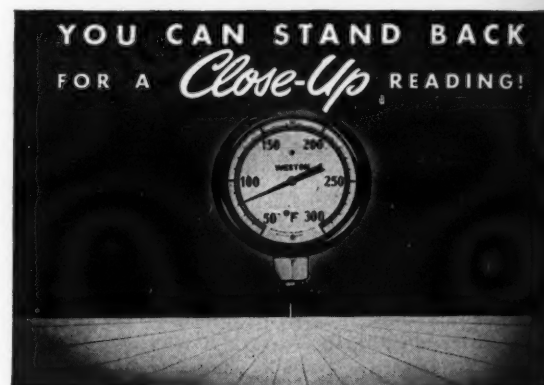
SALT SPRAY UNITS For Corrosion Tests

Efficiency and durability of Alberene Boxes are widely recognized. We furnish fully-equipped units; to Navy or your own specifications. Prompt delivery.

Data, specifications and illustrations . . . factual and helpful . . . about Alberene Stone, the material that outlasts the building.

ALBERENE STONE CORP. OF VIRGINIA
 419 4th Avenue, New York

When inquiring specify CEP4868 — see information request blank, pgs. 2-3



. . . all-metal temperature gauges also provide the ruggedness . . . the long-life accuracy . . . essential in these busy days!

Every step . . . every minute . . . is vital in this battle against time. Which explains why WESTON all-metal Temperature Gauges have been so widely adopted throughout industry. Readily mounted at any angle desired, their large gauge-type dials can be accurately read from a distance. In addition, their simplified all-metal construction . . . without liquids or gases . . . provides unusual ruggedness and eliminates the common sources of thermometer troubles. They stay "on the job" . . . maintaining their high initial accuracies . . . far longer! Available in sizes and stem lengths for most needs. Accuracy guaranteed within 1% over entire scale. Literature sent on request. Weston Electrical Instrument Corporation, 586 Frelinghuysen Avenue, Newark, New Jersey.

WESTON ALL-METAL TEMPERATURE GAUGES

When inquiring specify CEP4869 — see information request blank, pgs. 2-3

"Anets" LABORATORY CABINETS



Speed-Up War Work by Providing Automatic Temperature and Humidity Control

Used by LEADING FIRMS THROUGHOUT THE U.S.A.

for DRYING . . . BAKING

- ★ MOISTURE ABSORPTION CONTROL
- ★ UNIFORM PROCESSING AND CURING
- ★ HEAT AND MOISTURE EVAPORATION
- ★ FAST PRODUCTION, OVEN DRYING
- ★ CHEM. RESEARCH • BACTERIA CULTURES
- ★ GRADUATED COOLING FOR UNIFORMITY
- ★ PRECISION CHEMICAL DRYING
- ★ FABRIC, PLASTIC AND WOOD CURING

ANY SIZE UP TO LARGE INSULATED ROOMS

If you have other war production problems where automatic temperature and humidity control can step-up delivery, prevent waste and insure uniform quality . . . then call on Anetsberger Bros. Write telling us the size of box or room, temperature and humidity range desired.

PORTABLE AUTOMATIC A.S.M.E. STEAM BOILER

A fully automatic A.S.M.E. approved boiler from 2 H.P. up. Gas or oil fired. Small, compact and powerful. Get Bulletin No. 117.

LET US BID ON YOUR SUB-CONTRACT WAR ORDERS

Anets equipment is used by Army, Navy, Marine and Air Corps. We're been in war production for over a year. Send in your blueprints. Prompt bids submitted. Write.

Anetsberger Bros. 3320 Elston Avenue Chicago, Illinois

When inquiring specify CEP4870 — see information request blank, pgs. 2-3

WITH PRESENT INCREASED PRODUCTION WE CAN'T HAZARD RUNNING SHORT OF VALUABLE LIQUIDS. THAT'S WHY WE CHECK WITH LIQUIDOMETER TANK GAUGES "They're Always Dependable"

Today production must go on! Valuable liquid shortages due to oversight are inexcusable!

LIQUIDOMETER Tank Gauges assure accurate, trouble-free readings or recordings at all times!

100% automatic—these gauges insure accurate readings at all times. No pumps, valves, or auxiliary units required to read them. Models available so that readings can be taken remotely from or directly at the tank. Remote reading types utilize balanced hydraulic transmission system which completely compensates for temperature variations on communicating tubing. Accuracy unaffected by specific gravity of tank liquid.

Approved for gauging hazardous liquids by Underwriters' Laboratories and other similar groups.

Write for complete details



Models available to automatically control pumps, motors, signals or other devices for maintaining minimum or maximum liquid levels.

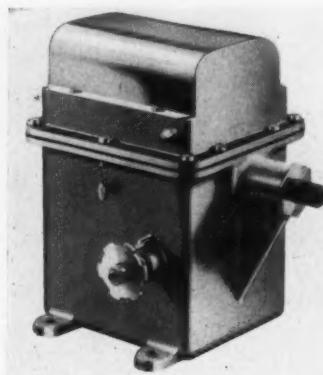
THE LIQUIDOMETER CORP.
38-18 SKILLMAN AVE., LONG ISLAND CITY, N.Y.

When inquiring specify CEP4871 — see information request blank, pgs. 2-3

INSTRUMENTS

Control Motor For Operating Butterfly Valves, Dampers

Microtrol has high torque proportioning control motor



MICROTROL . . . assures dependable operation

Uses — For operating butterfly valves, multiple ratio fuel valves and regulation of dampers in air conditioning and drying systems.

Features — All oil submerged units have operating mechanism completely submerged in oil and sealed in die-cast case.

Description — High torque proportioning control motor with built-in limit switches and

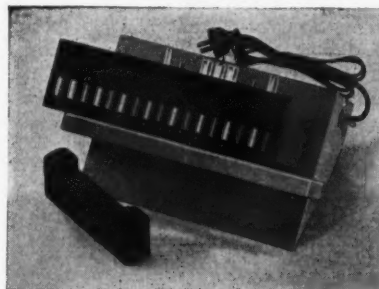
potential dividing rheostat. Output shaft is driven by a shaded pole induction motor through gear reduction of machine cut, heat treated gears. Request Bulletin F-1420-3.

BARBER-COLMAN CO., Dept. CEP, Rockford, Ill.

When inquiring specify CEP4872 — see information request blank, pgs. 2-3

Midget Lamp Gives Daylight Conditions For Colorimetric Work

Useful for night work or in numerous places where proper daylight conditions are never available



MIDGET DALITE LAMP . . . for colorimetric determinations

Uses — Originally designed for making colorimetric determinations at night or in dark places, it has proved equally effective for all routine testing even in daylight.

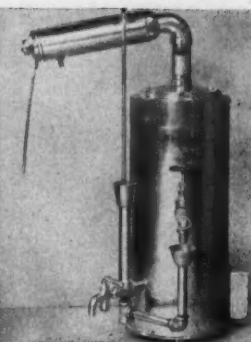
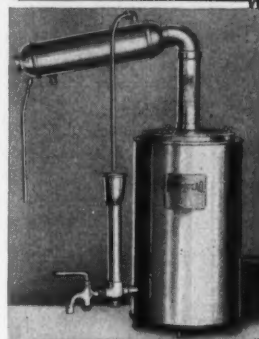
Features — Lamp gives uniform daylight condition at all times.

Description — Comparator base sits on the shelf at an angle of 45 degrees so that in making readings, one can look directly into the slots in the side and base. Handling and possible breakage is eliminated, as only the sample tubes need to be handled. Fitted with Dalite glass, special bulb, cord and switch and operates on any 110 volt circuit. Can be used with the manufacturers pH, chlorine or phosphate comparator.

W. A. TAYLOR & CO., Dept. CEP, 7400 York Rd., Baltimore, Md.

When inquiring specify CEP4873 — see information request blank, pgs. 2-3

For Hard Water



For Soft Water

BARNSTEAD WATER STILLS

The character of your water supply should determine the type of water still to use. If your local water is soft, use the standard Barnstead Stills. If it is hard or highly contaminated, use the Barnstead Extra Duty Stills. In addition to all regular Barnstead features, the Extra Duty stills have higher evaporators, to prevent foaming over; constant bleeder devices to prevent rapid scale formation; and special improvements that make it very easy to clean the still's interior. Sizes for all models range from 1/2 gallons per hour up. Operation is by gas, steam or electricity.

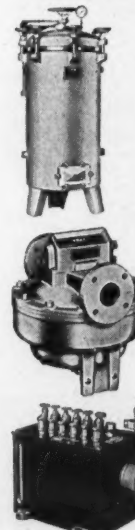
Barnstead
STILL & STERILIZER CO. INC.

66 LANESVILLE TERRACE, FOREST HILLS, BOSTON, MASS.

When inquiring specify CEP4874 — see information request blank, pgs. 2-3

To Win the war of Production

Let BOWSER HELP YOU HANDLE LIQUIDS



Production! MORE Production! That's today's challenge to industry! More metal parts for planes, tanks, guns . . . more liquids . . . longer machine hours . . . mean that more liquids must be handled. And, that is where Bowser can help you . . . because it has specialized in liquid handling systems for 57 years. To help you. Bowser makes, filters for cutting oils, coolants and many other liquids . . . accurate meters for measuring liquids . . . lubricators and lubricating systems to keep machines running . . . wheel tanks, automatic liquid blending systems . . . and many other items. Whenever you have a problem of liquid handling . . . consult Bowser first!

S. F. Bowser & Co., Inc.



Fort Wayne, Ind.

LIQUID CONTROL SPECIALISTS - SINCE 1885
METERING • DISPENSING • STORING • LUBRICATING • FILTERING • DISTILLING

When inquiring specify CEP4875 — see information request blank, pgs. 2-3

Non-stop straining of any liquid from gasoline to glue

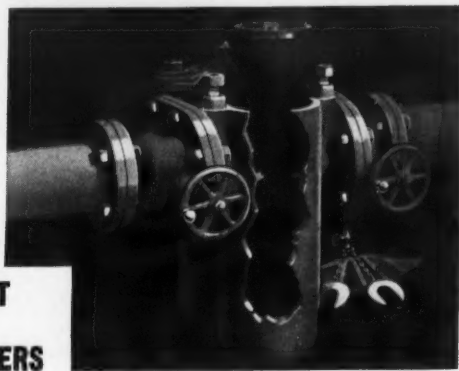
ELLIOTT TWIN STRAINERS

are serving the process industries in the clearing of water, solutions, and liquids of various degrees of viscosity. Operation is continuous — when a straining basket becomes fouled, the flow is shunted to the twin basket, and the fouled unit removed and dumped.

Strainer baskets are provided in any mesh that conditions demand. Corrosion-resistant materials used when required. Sizes from 1 in. to 8 in., pressures to 300 lb. Also made in another type for water straining, and in single cylinder design for use where occasional shut-down for cleaning is permissible. Self-cleaning strainers too, for water only.

TELL US YOUR STRAINING PROBLEM

When inquiring specify CEP4876 — see information request blank, pgs. 2-3



A-274



ELLIOTT COMPANY

Accessories Dept.
JEANNETTE, PA.

District Offices in
Principal Cities.

Today we sell SPEED

To a lot of operating men, the most welcome feature of the Johnson Rotary Pressure Joint is the money-saving way it puts an end to all the tinkering, servicing, and oiling demanded by old style stuffing boxes and steam fits.

But far more important to war time industry is the fact that the Johnson Joint offers a simple, tested way to step up production. Its packless, self-oiling, self-adjusting, self-aligning design saves much valuable time that is wasted when machines are shut down to repack or repair stuffing boxes. In addition it offers a simpler, neater way to provide modern, efficiency-boosting methods of draining rolls and drums.

50,000 installations of the Johnson Joint—all within less than ten years—show how rapidly it is setting a new pace in industry.

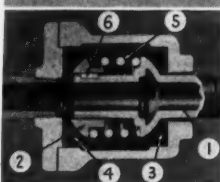
Write for Bulletin

THE JOHNSON CORPORATION
826 Wood St., Three Rivers, Mich.

JOHNSON Rotary Pressure JOINTS

When inquiring specify CEP4877 — see information request blank, pgs. 2-3

—for Dry Cans, Calenders, Ironers, Mills and similar machines with steam or liquid filled cylinders.



Nipple (1), fastened to roll. Sliding collar (2) keyed (4) to nipple. Carbon graphite seal ring (3) and bearing ring (4), which eliminate oiling and packing. Spring (5), for initial seating only; joint is actually pressure-sealed.



INSTRUMENTS

Proportioner Can Be Used on Any Standard Flow Measuring Device

Provides accurate feeding of chemicals in proportion to volume of water being treated

Uses — To provide accurate feeding of chemicals in proportion to the volume of water being treated.

Features — Insures uniform treatment at all times regardless of volume of water entering treating plant. Instant increase or reduction of chemical charge should water require a change of treatment.

Description — Proportioner can be used with any standard type of flow measuring device such as venturi, orifice, propeller or disc type meter which can be equipped with a contactor. Chemical proportioner can be placed at any distance from the proportioner and chemical feeder. This equipment consists of a standard make of timer, relays, motor, reduction gear and cable drum; all completely assembled in a control box designed for mounting on the chemical tank. The flow measuring device equipped with a contractor is placed in the raw water supply line leading to the treating plant. The impulse set up by contactor is transmitted electrically to the proportioner which is set in motion and lowers the swing pipe into the chemical feeder thus providing feed of chemicals in proportion to flow of water. Feeder can be operated manually in event of failure of meter contactor. Tests show accuracy of within 2% at all rates of flow of raw water into treating plant.

GRAVER TANK & MFG. CO. INC., Dept. CEP, 4809-12 Tod Ave., East Chicago, Ind.

When inquiring specify CEP4878 — see information request blank, pgs. 2-3

Determining Mobility of Viscous Materials

Four-page folder illustrates and describes in detail a mobilometer designed for determining the body or mobility of various industrial products such as paints, pastes, vitreous enamel slips, lubricant greases, emulsions, dispersions and other viscous or semi-plastic materials. Full explanation is given of the principle of design which it is said overcomes loss of hydrostatic head, frequently encountered in testing certain materials with other devices. Interesting data is contained in a table containing mobility determinations for a wide variety of materials obtainable with this instrument. This folder is available upon request.

HENRY A. GARDNER LABORATORY, INC., Dept. CEP, 4723 Elm St., Bethesda, Md.

When inquiring specify CEP4879 — see information request blank, pgs. 2-3



CONTROL BOX provides quick and accurate operations



These Famous LINK-BELT ELEVATOR BUCKETS are Built for Service

• There is a standard Link-Belt elevator bucket for every job. The line includes steel, malleable iron and Promal buckets of suitable size and type to meet any requirement. They are recognized as the standard for toughness — smooth, uniform construction and correct design... features that assure proper filling, free and clean discharge and long life.

General Catalog No. 800 contains complete engineering and descriptive data about operation and design of bucket elevators. Write for copy today.

8882-A

LINK-BELT COMPANY

Chicago, Indianapolis, Philadelphia, Atlanta, Dallas, San Francisco, Toronto. Offices, warehouses, and distributors located in principal cities.

When inquiring specify CEP4880 — see information request blank, pgs. 2-3

that Your PUMPS May Live Longer and Work Better!

ENGINEERING PUMP DATA



Blackmer Engineers have prepared this material to help you maintain your present pumps at their greatest efficiency:

Bulletin 301: "FACTS ABOUT ROTARY PUMPS."

Bulletin 302: "PUMP ENGINEERING DATA" — Useful tables on pumps and piping.

No. SER-1: "10 WAYS TO MAKE ROTARY PUMPS LAST LONGER" — A maintenance check list in handy card form.



Hand Pumps 54 Models Capacities 5 to 700 GPM. Pressures to 300 psi. Reduction Geared Pumps.

Ask the Blackmer Man — or write Blackmer Pump Company 1847 Century Avenue, S.W., Grand Rapids, Michigan for copies of all three of these new bulletins. THEY ARE FREE TO PLANT MEN

BLACKMER Rotary PUMPS
"BUCKET DESIGN" — SELF-ADJUSTING FOR WEAR

When inquiring specify CEP4881 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

INSTRUMENTS

Remote Control Systems for Liquids

Recent issue of instrument manufacturer's house publication contains an article on liquid level control, featuring a system that achieves the desired control without any actual contact with the liquid concerned. Text, photos and diagrams explain the employment of a "radio" principle or the utilization of high frequency resonance, by means of a level sensitive condenser or pick-up mounted on gage glass and joined to remote control by coaxial cable. Bulletin No. Four available upon request.

WHEELCO INSTRUMENT CO., Dept. CEP, Harrison & Peoria Sts., Chicago, Ill.

When inquiring specify CEP4882 — see information request blank, pgs. 2-3

Self-Operating Temperature Controller in Wide Range

For hot water tanks, canning retorts, exhaust boxes and textile dryers



SELF-OPERATING CONTROLLER has capillary tube and bulb

Uses — Self-operated temperature controller for hot water storage heaters, tanks, canning retorts, exhaust boxes, textile dryers, scouring bowls and various installations where automatic controls are desired.

Features — Compact, parts are easily accessible. Small size does not effect interchangeability of tube system which can be easily accomplished.

Description — This controller uses no power outside the energy developed in its own system. The temperature changes at the sensitive element or bulb in the apparatus under regulation raises or lowers the vapor pressure of the volatile liquid in the tube system. A capillary connecting tube transmits the pressure change to the power bellows. The bellows expand and contract in response to the temperature changes at the bulb, position the steam valve and so control the temperature. Temperature and pressure models in a number of ranges are available in this controller.

C. J. TAGLIABUE MFG. CO., Dept., CEP, Park & Nostrand Ave., Brooklyn, N. Y.

When inquiring specify CEP4883 — see information request blank, pgs. 2-3

Electronic Pyrometer Controller

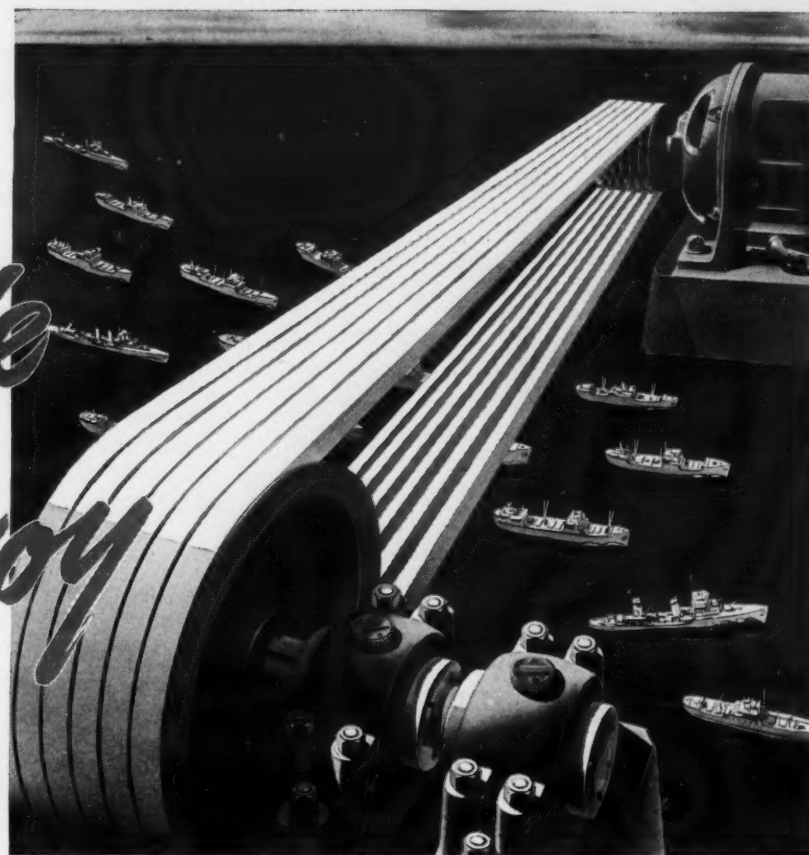
A six-page folder provides complete technical information on an advanced pyrometer controller operating on the electronic principle. Photos, diagrams and tables are of assistance in following the clear and detailed descriptions of method of operation, features of design and application of the device to such uses as controlling temperatures up to 3,600 degrees F. in industrial furnaces, ovens and kilns. Bulletin 544a sent on request.

THE BRISTOL CO., Dept. CEP, Waterbury, Conn.

When inquiring specify CEP4884 — see information request blank, pgs. 2-3

Safe Convoy

FOR VICTORY'S VITAL POWER



DODGE D-V Drives are stationed at almost countless battle sectors along the vastly extended industrial front . . . keeping open the channels from power source to driven shafts through which flow Victory's vital power . . . on round-the-clock schedules constantly warding off the raids of friction and waste — guarding against interruptions — convoying power safely to greatly accelerated production machines.

Dodge D-V Drives are complete power transmission units of Matched Quality — sheaves and V-belts are built for each other — designed to eliminate slip

— to absorb sudden shock and to provide a clear passage for power at all speeds. Accurate machining of sheaves results in even pull on each belt — reduces wear, and insures the continuous, uninterrupted operation demanded by our war production plants.

Dodge D-V Drives are but one part of the complete Dodge line — bearings, clutches, pulleys and other power transmission units which "convoy" power to Victory production lines.

Depend upon Dodge for . . . "The Right Drive for Every Job."

DODGE MANUFACTURING CORPORATION, Mishawaka, Indiana, U. S. A.

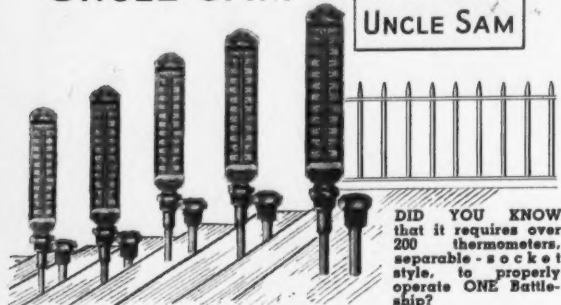


When inquiring specify CEP4885 . . . see information request blank, pgs. 2-3

Palmer Thermometers

ARE HELPING UNCLE SAM

HELP WANTED
UNCLE SAM



DID YOU KNOW
that it requires over
200 thermometers,
separable-socket
style, to properly
operate ONE Battle-
ship?

The demand placed on the Thermometer Industry for these requirements is heavy but to win this war, we must all co-operate.

To work for Uncle Sam, the thermometers must be designed for superior strength, they must register quickly and accurately at all times and they must be easy-to-read. PALMER THERMOMETERS are known for their sturdiness, guaranteed permanent accuracy, their sensitivity and the easy-reading "Red-Reading-Mercury" feature.

LET US HELP YOU WITH YOUR
THERMOMETER PROBLEMS
(Catalog No. 300-D sent on request)

THE PALMER CO.

MFRS.

Industrial, Laboratory, Dial and Recording Thermometers

2519 Norwood Ave.,
Canadian plant:

Cincinnati, Norwood, Ohio
King and George Sts., Toronto

When inquiring specify CEP4886 — see information request blank, pgs. 2-3

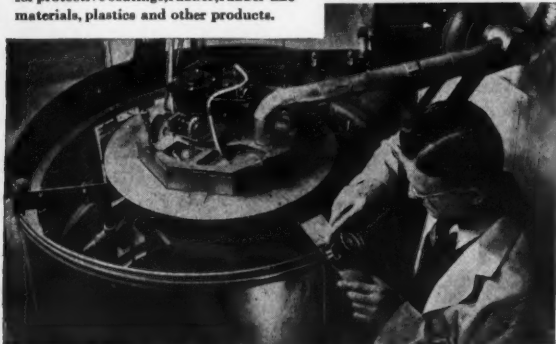
RAPID AND DEPENDABLE

INDICATION OF RESISTANCE TO WEATHER OR
LIGHT IS OBTAINED FROM TESTS MADE IN

The NATIONAL Accelerated
Weathering
Unit

PROVED BY EXPERIENCE to provide
an accurate indication of resistance to
deterioration from outdoor exposure.

A TRUE STANDARD OF COMPARISON
for protective coatings, rubber, rubber-like
materials, plastics and other products.



WRITE FOR DESCRIPTIVE BULLETIN

NATIONAL CARBON COMPANY, INC.

Unit of Union Carbide and Carbon Corporation

UCC

CARBON SALES DIVISION, CLEVELAND, OHIO
General Offices: 30 East 42nd St., New York, N. Y.
Branch Sales Offices: New York, Pittsburgh, Chicago, St. Louis, San Francisco

When inquiring specify CEP4887 — see information request blank, pgs. 2-3

INSTRUMENTS

Counting, Timing & Recording Devices Catalog

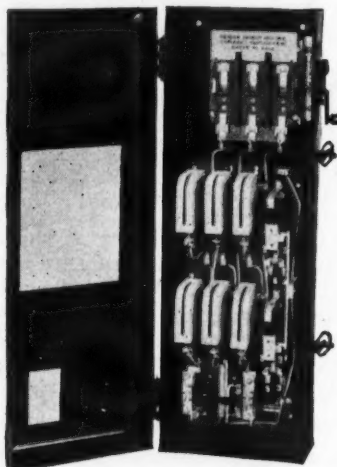
A new 50-page catalog on counting, timing and recording devices illustrates and describes important developments in mechanical and electrical counters; recently developed predetermined electric counters and high speed coil winding counters. Also described are actuating switches for electric counters, together with numerous applications of photo-electric counting, automatic timing and recording devices and time totalizers, which measure and record the total operating time of alternating current circuits. Copies of Catalog 42 are available upon request.

PRODUCTION INSTRUMENT CO., Dept. CEP, 702 W. Jackson, Chicago, Ill.

When inquiring specify CEP4888 — see information request blank, pgs. 2-3

Magnetic Reversing Starters Provide Control and Protection

*Give full voltage reversing control and short-circuit
protection in one unit; save space, installation
time; improve appearance*

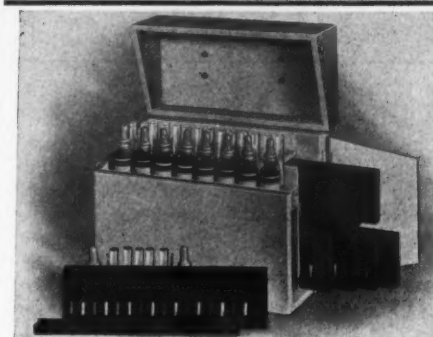


UNIT WITH COVER OPEN . . show-
ing motor circuit switch

completely wired and ready to operate after connection of incoming power lines, outgoing motor lines and control circuit. The fusible forms combine a manually operated motor circuit switch with clips for cartridge-type fuses. Under short-circuit conditions, the fuses provide fast interruption of circuits having maximum available current of 10,000 amperes at rated voltage. The motor circuit switch is operated from the outside of the enclosing case by a handle so interlocked with the cover that the switch must be in the "off" position before the cover can be opened. This makes it impossible for an operator to attempt to make adjustments on the inside of the enclosure without first opening the circuit. Circuit-breaker forms provide simultaneous tripping of all phases on short circuits, and have a trip-free mechanism which prevents holding the breaker closed under short-circuit conditions. The breaker can be reset after operation by returning the operating handle to the "off" position. Breakers in the smaller ratings have bimetal thermal trip units. Larger breaker ratings have interchangeable bimetal thermal trips as well as magnetic instantaneous trips. When the starters are used in

Uses — For full-voltage starting and reversing of squirrel cage induction motors; also suitable for the primary control of wound-rotor motors.

Features — Starters are designed to provide full-voltage reversing control and short-circuit protection in one unit, to save space and installation time, to give greater protection to equipment and operators, and to improve appearance. They are



Only \$42
with any three-
color standard
slides

A COMPLETE pH COMPARATOR ... designed for portability!

Taking less than a foot of space and weighing from 7½ to 11½ pounds, the complete Taylor Long Range pH Slide Comparator is ideal for versatile use. The sturdy wooden carrying case contains Slide Comparator base and from 3 to 9 pH color slides, indicator solutions, pipettes, and 14-5cc test tubes. Accurate determinations may be made in one minute. Taylor Color Standards carry AN UNLIMITED GUARANTEE AGAINST FADING.

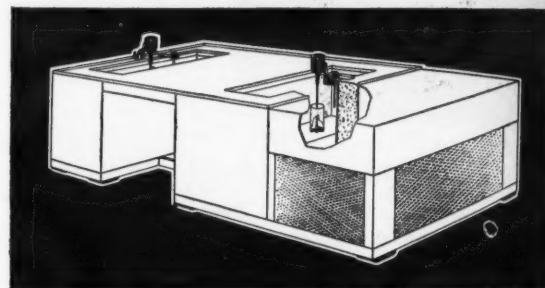
See your dealer or write direct
for informative booklet.



W. A. TAYLOR AND CO.

7302 YORK RD., BALTIMORE, MD.

When inquiring specify CEP4889 — see information request blank, pgs. 2-3



Dual-Temperature Baths with NEW KOLD-HOLDER

Now, you save time and obtain greater accuracies by having hot and cold liquid processing baths together in the new KOLD-HOLDER Dual Temperature Machine! Controlled temperatures up to 200° F. and higher on the hot side; down to -70° F. on the cold . . . with convenient "knee-hole" desk and working space between the two. Highest efficiencies, low operating and maintenance costs. Special controls for special work . . . tell us your requirements and we will furnish complete data.

Chicago Office: 201 N. Wells, Randolph 3986
New York Office: 1819 Broadway, Circle 63092

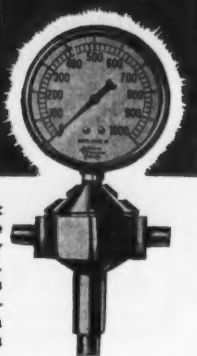
KOLD-HOLD MANUFACTURING CO.

434 N. Grand Ave., LANSING, MICH., U. S. A.

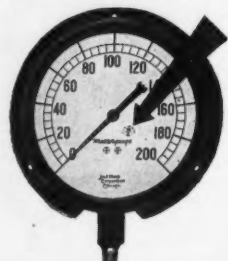
When inquiring specify CEP4890 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

MARSH Gauges



WHEN you need a gauge think of Marsh. For the Marsh name has been a symbol of gauge accuracy and stamina for more than 75 years. Here is a complete line—one that holds an answer for every application. Pictured at right is the Marsh gauge with diaphragm attachment. It keeps viscous liquids from clogging the gauge—protects foodstuffs and other delicate products from contamination.



LOOK FOR THE "RECALIBRATOR"

Any gauge can be knocked out of adjustment. But if it's a Marsh Gauge, with the exclusive Marsh "Recalibrator", the twist of a screwdriver wipes out all error—makes the gauge accurate again at every point on the dial.

Marsh products also include Dial Thermometers, Pressure and Temperature Recorders, Steam Traps, Radiator Valves and Traps and other heating specialties. Write for bulletins.

JAS. P. MARSH CORPORATION
2095 Southport Ave., Chicago, Ill.

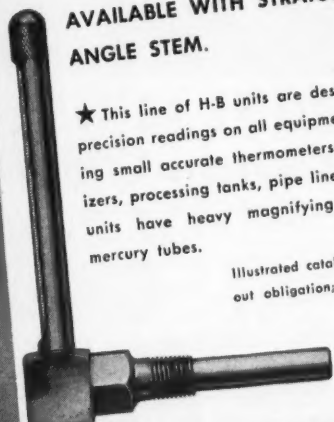
When inquiring specify CEP4891 — see information request blank, pgs. 2-3

THE H-B MIDGET INDUSTRIAL THERMOMETER

SCALE ENGRAVED ON GLASS.
AVAILABLE WITH STRAIGHT OR
ANGLE STEM.

★ This line of H-B units are designed for precision readings on all equipment requiring small accurate thermometers—pasteurizers, processing tanks, pipe lines, etc. The units have heavy magnifying lens-front mercury tubes.

Illustrated catalog sent without obligation; write today.



H-B INSTRUMENT CO., Inc.
PRECISION SCIENTIFIC **H B** INDUSTRIAL INSTRUMENTS
2510 NO. BROAD STREET, PHILADELPHIA, PA.

When inquiring specify CEP4892 — see information request blank, pgs. 2-3

INSTRUMENTS

conjunction with a momentary contact push-button station, undervoltage protection is provided by an electrical interlock on each contactor. An isothermic temperature overload relay protects the motor from dangerous overheating caused by overloads or other conditions. Contactors have layer-wound coils, molded arc chutes, and readily accessible contacts, and are mechanically interlocked so that only one contactor can be closed at a time.

Description — These single-unit starters consist of two mechanically interlocked reversing contactors, a two-pole overload relay, and either a circuit breaker or a fusible or non-fusible motor circuit switch. New line includes NEMA size 0 to 4 a-c starters covering single phase and 3 phase motors in sizes up to and including 100 h.p. at 440 or 550 volts. Available in type 1 general purpose enclosures, type 1A semi-dust-tight enclosures, type 5 dust-tight enclosures, or type 4 water-tight enclosures.

GENERAL ELECTRIC CO., Dept. CEP, Schenectady, N. Y.

When inquiring specify CEP4893 — see information request blank, pgs. 2-3

Decade Capacitor Accurate to 1%

Simple twist of knobs gives choice of any capacity value from .01 to 11.1 mfd. in .01 mfd. steps



DECADE CAPACITOR . . . for laboratory and industrial use

left to right across the three will total up the value available at the binding posts. Adjustments are made progressively in small uniform steps. All decades employ paper or mica dielectric capacitors of high quality and stability.

Description — Instrument measures 7 by 8 by 5 3/4 inches and weighs 8 lbs. Is housed in neat walnut cabinet with hinged cover and snap lock. Known as "Decade Capacitor Type DK". Three models are available: 11.1 total in .01 mfd. steps; 1.11 mfd. in .001 steps; and 1.11 in .001 steps with mica dielectric throughout.

INDUSTRIAL INSTRUMENTS, INC., Dept. CEP, 156 Culver Ave., Jersey City, N. J.

When inquiring specify CEP4894 — see information request blank, pgs. 2-3

Uses — For most laboratory as well as industrial applications, particularly for bridge measurements, filter design and experimental tuned circuits.

Features — Provides choice of any capacity value from .01 to 11.1 mfd. in .01 mfd. steps, or other ranges, at the twist of three knobs. Etched metal panel has dials calibrated directly in capacitance so that reading from

*The simple way
in problems of
process heat*

CHROMALOX Electric HEATING UNITS

A few degrees of temperature, one side or the other, may make all the difference between good product and poor. Why run the risk of spoiled product due to broadly fluctuating temperature, when Chromalox electric heat, automatically controlled, will give you just the temperature you want, and hold it? This in itself is one big reason why so much process work is now carried on with Chromalox electric heating units.

But it's not the only reason. Safety, lower insurance rates, cleanliness, ease of operation, neat and simple installation, convenience and low cost of installation, frequently increased production—all combine to point unwaveringly toward electric heat as the modern method in process work.

So many forms and types of these units are now standardized, that practically any type of process can be easily served. The pictures at the left show only a few of these many forms, which can be supplied to provide temperatures as high as 1000 deg. F.



Let's Get Down To Cases

Take one—or several—of your process problems requiring heat. State the essential conditions, and accompany your letter with a rough pencil sketch of the kettle, drying chamber, or other equipment involved. The Wiegand engineering staff, experienced on matters of electric heat, will consider your problem, recommend the required equipment, and give you figures on cost, temperature regulation, etc. from which you can estimate the advantages of electric heat over your present method. Do this now.

For general information, mail the coupon with your business letterhead for your copy of the 64-page Chromalox Book of Electric Heat.

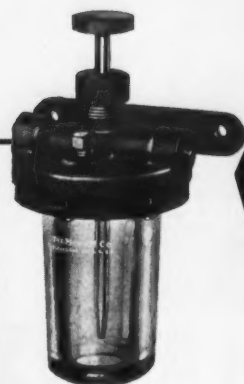
EDWIN L. WIEGAND COMPANY

7517 Thomas Blvd. Pittsburgh, Pa.

Send me the CHROMALOX BOOK OF ELECTRIC HEAT

Name _____ Position _____

When inquiring specify CEP4895 — see information request blank, pgs. 2-3



NEW MERIAM SIGHT FEED BUBBLER FOR Purging LINES AND OTHER APPLICATIONS

★ Widely used for purging lines and for operating tank liquid level gauges . . . also in chemical processing, with different liquids in the bowl, to determine the presence of undesirable or dangerous materials in gases.

When the bubbler bowl is filled with liquid a visual indication is given by bubbling. The adjustable needle valve at top controls the rate of bubbling.

This Meriam Sight Feed Bubbler with bowl of Pyrex glass is good for line pressures up to 30 lbs. per sq. in.; of plastic, for pressures up to 100 lbs. Sturdily built for lasting, trouble-free operation.

Available in ring type (illustrated) or strap type—both types providing for removal of bubbler bowl. For complete information on this new Meriam product write for Bulletin 21.

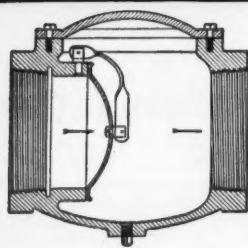
THE MERIAM CO.

1989 WEST 112 STREET

CLEVELAND, OHIO

When inquiring specify CEP4896 — see information request blank, pgs. 2-3

Greater Safety— LOWER MAINTENANCE EXPENSE



Insure your equipment against dangers of reverse flow — extinguished pilots — and hazards of asphyxiation and explosion. Connelly Back Pressure Valves provide a dependable check against this danger with no need of other safeguards. Light

weight valve disc is balanced for extreme sensitivity — acts instantly when back flow occurs with negligible resistance to normal flow. Removable cap makes flap easily accessible for cleaning and inspection without removing valve from line. Made in a wide range of styles and sizes.

Write for illustrated bulletin

Connelly

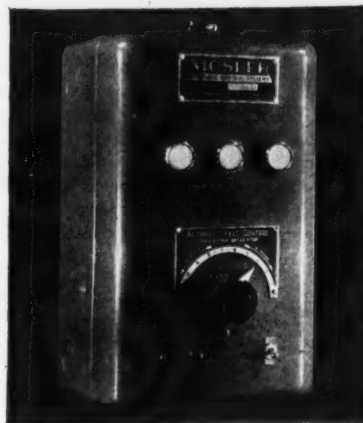
IRON SPONGE AND
GOVERNOR COMPANY
CHICAGO, ILLINOIS ELIZABETH, N. J.

When inquiring specify CEP4897 — see information request blank, pgs. 2-3

INSTRUMENTS

Robot Controls Pulverizing Feeder

Electronic device keeps constant check on mechanical feeding; saves pulverizing machinery, motors, power



Uses — For controlling the mechanical feeding of pulverizing machinery for far greater accuracy and economy than would be possible with human control.

Features — Close and constant check-up provided by this automatic control safeguards against clogging, overheating and motor burnouts arising from over-

AUTOMATIC FEED CONTROL . . . saves machinery, motors & power from lot to lot, and changes in moisture content which increase or decrease grindability. Costly power relay devices are eliminated by use of electronic means, thus effecting a considerable saving in equipment cost. Warnings are given in lights.

Operation — The control is set for the full load current of grinder motor, and keeps check through its load-range regulator. When the control is first installed, an ammeter is wired into the circuit and the grinder motor started. When full load is indicated on the ammeter, the load-range regulator knob is turned to decrease the load until the red light shows. The control is then set for permanent operation. The feeder motor is interlocked with the grinder so that it cannot be started until the latter is in operation. After the grinder motor and the feeder motor on to indicate operation of the control. Since the load-range regulator has a range of from 50 to 125 per cent are started, a white signal light on the control panel flashes of the grinder motor full load, the equipment can be used for a wide variety of materials. Once the maximum load is set for a material, however, the controller keeps close tabs on the limit. If the material changes, or if for any reason the load in the mill rises above full load setting, the controller will cut off the feeder motor automatically, and the red light goes on. The mill will continue to discharge and the load in the mill will drop to below the load point setting, and at this point the feeder will cut in again and the red light will go off. A continuous red light indicates that the grinder is not discharging, which may be caused by too wet material or the plugging of the discharge line. If the red light is on more than 30 seconds, it is a signal to the attendant to investigate. A green light, or no load signal, goes on when the load in the mill drops about 25% below the full load setting. This indicates that material is not reaching the grinder, and may be due to an empty bin or arching over the mill or feeder. **Description** — Equipment comprises a control unit housed in a drawn shell steel case, connected to the magnetic contactor switch of the motor operating the mechanical feeder. A special current transformer is supplied, adjusted for the normal full load current of the grinder motor. This transformer is the only accessory equipment required in addition to the feeder motor magnetic contactor switch, which would normally be used even without the automatic control.

How to GET RID OF ETERNALLY "FIXING" Liquid Level Controls

MAGNETROL

The Control with NO Bellows—NO Packing
Box—NO Diaphragm—NO Electrodes

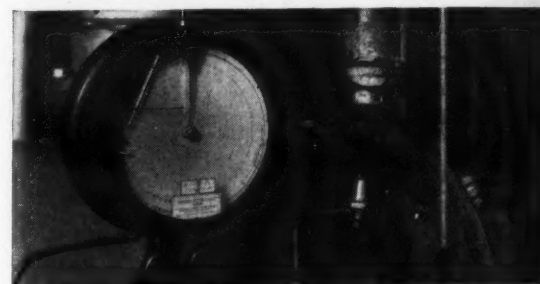
Frequent maintenance and repair of liquid level controls is a thing of the past where Schaub MAGNETROLS are installed. That's because there's virtually nothing to wear out or get out of order on these magnetically-operated controls. There is no mechanical linkage between float and switch. Yet they are extremely accurate, providing dependable control at operating differentials as low as 3/4" min. and as high as 13 ft. Models are available to handle any liquid at practically any working pressure or temperature—and to perform a wide variety of functions.

Send Today for Complete Data File
Showing All Models and Sizes

FRED H. SCHAU ENGINEERING CO., INC.
323 W. Huron St., Chicago, Illinois

MODEL 750-CS
Completely sealed unit for high pressure applications using refrigerants and certain other liquids up to 750 lb. pressure and -38° to +500° F. temperature. Only one of many models.

When inquiring specify CEP4898 — see information request blank, pgs. 2-3



POSITIVE ACTION... Closer Temperature Control!

There's nothing mysterious about the superior control furnished by Foxboro On-Off Temperature Controllers. It's a matter of simpler, sounder design that insures positive control action for slightest temperature deviations. No frictional lags . . . no lost motion . . . no throttling effect.

Sturdily constructed . . . pneu-

matic operation . . . filled-type thermal system. Automatic direct-connected recording unit gives continuous accurate records, free from detent action.

Write for Bulletin 225-1 describing various models. The Foxboro Company, 190 Neponset Avenue, Foxboro, Mass., U. S. A. Branches in principal cities of U. S. and Canada.

FOXBORO
Reg. U. S. Pat. Off.

TEMPERATURE
CONTROLLERS

When inquiring specify CEP4899 — see information request blank, pgs. 2-3

INSTRUMENTS

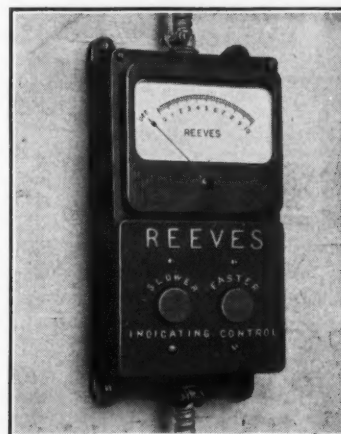
Control panels are built in capacities up to about 250 h.p. for the grinder motor and about 5 h.p. for the feeder motor. Standard voltages range up to 550 volts, but equipment can be built for voltages up to 2300 on the main grinding motors. The control proper operates from the 110 volt, 60 cycle line.

INDUSTRIAL INSTRUMENTS, INC., Dept. CEP, 156 Culver St., Jersey City, N. J.

When inquiring specify CEP4902 — see information request blank, pgs. 2-3

Meter Indicates Shaft Speeds

Electric remote instrument gives readings in terms of "speed setting" of output shaft



SHAFT SPEED INDICATOR . . .
for variable transmissions

button control station, or elsewhere. Provided with a full scale adjusting screw to permit convenient adjustment of the indicator reading to coincide with some previously established relationship between indicator reading and variable speed chart. Can be operated from power supply line if voltage is quite steady, or the power may be supplied in the form of a single standard size flashlight cell. The load on the flashlight battery is only .001 ampere or less, so the cell will last its "shelf life", or more than a year. **Operation** — The r. p. m. change on the variable speed shaft is not uniformly proportional to the amount of change of indicator reading at all points on the indicator scale. For this reason, it is impractical to supply the indicator calibrated to read directly in r. p. m., f. p. m., pounds per hour, minutes of baking time, or other similar measurements. However, the user can make up a chart to show indicator readings corresponding to the requirements of his particular installation (r. p. m., f. p. m., etc.) after determining same by experimenting. This chart should be used in conjunction with the indicator, and should be checked from time to time so that it can be corrected, if necessary, by means of the adjusting screw. **Description** — The indicating meter is really a volt-meter with a long, four-inch arc scale built integrally with a pair of electric control push buttons in a cast iron housing. Push buttons for operation of electric remote control are mounted in the housing when combination of control and indicator are ordered; otherwise, push buttons are not furnished. A folder giving more detailed information about this indicating system is available upon request.

REEVES PULLEY CO., Dept. CEP, Columbus, Ind.

When inquiring specify CEP4903 — see information request blank, pgs. 2-3

SPECIFY This

"Radio Principle"

Temperature Controller

With . . .

PROVED-IN-SERVICE Superiority*

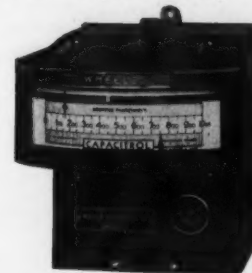
Your investment in this

Wheelco "Radio Principle"

Controller pays you daily

dividends in the form of:

- (1) Product Uniformity
- (2) Reduced Spoilage
- (3) Increased Production



Capacitrols have often paid for themselves during a single production cycle. The famous "Radio Principle" Control employed in Wheelco Controllers eliminates the faults inherent in all other types of controllers. Only Wheelco Controllers can give you instantaneous control combined with extreme accuracy of temperature measurement. Write today for free Bulletin D2 which gives detailed description of this controller.

* The Proved-in-Service Superiority of the Wheelco Capacitrol has been demonstrated in every application where temperature control is essential.

Wheelco Instruments Co.

841 HARRISON STREET . . . CHICAGO, ILLINOIS

When inquiring specify CEP4904 — see information request blank, pgs. 2-3



To our many friends who have helped make our first 50 years successful

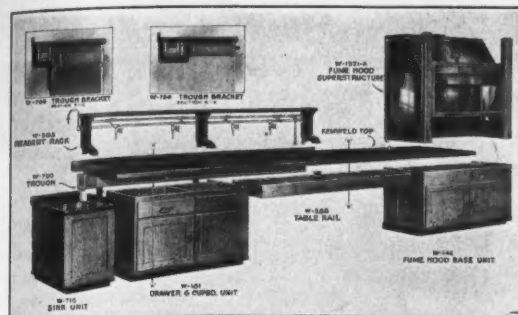
we wish to thank you for your support in the past and to express the hope that we may have the privilege of serving you in the years to come.

THE POWERS REGULATOR COMPANY

Offices in 47 Cities

50 Years of Automatic Temperature and Humidity Control

When inquiring specify CEP4905 — see information request blank, pgs. 2-3



Note how Kewaunee Standard Units are Assembled

Get Just What You Want and SAVE MONEY on Laboratory Furniture

Simply assemble these perfect matching Kewaunee units to build up the Desks, Cases, Tables, etc., to meet all your Laboratory needs. You'll be delighted with the harmonious appearance, working efficiency and low cost made possible by Kewaunee's "Cut-Cost" Plan of producing in quantities these standard matched units of highest quality. Normally all Kewaunee designs are made in wood or metal but for the duration only wood is available.

Write for Catalog showing the Kewaunee Matched Units.



C. G. CAMPBELL, President

5011 S. Center St., Adrian, Mich.

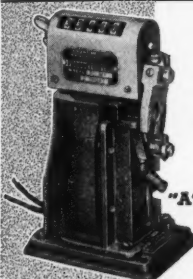
Eastern Branch: 220 E. 42nd St., New York, N. Y.

Mid-West Office: 1208 Madison St., Evanston, Ill.

Representatives in Principal Cities

When inquiring specify CEP4900 — see information request blank, pgs. 2-3

Soldiers of Production!

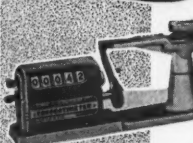


PRODUCTIMETERS

are good soldiers on the production line . . . rugged, constantly dependable, they are well fitted to guard against waste, lost time . . . conserving precious man-hours that can be used to produce MORE . . . ready to give you accurate count day after day, as you turn out essential products for winning the Victory.



"B" Check your machines now to see where you can use Productimeters. Then . . .



WRITE FOR COMPLETE DETAILS!
A. Catalog 16—Electrically operated counters
B. Catalog 7—Stroke Counters
C. Catalog 10—Case Counters

DURANT MANUFACTURING COMPANY

1951-A N. Buffum St.
Milwaukee, Wis.

PRODUCTIMETERS
THE SPEEDMETERS OF INDUSTRY

192-A Eddy St.
Providence, R. I.

When inquiring specify CEP4901 — see information request blank, pgs. 2-3

YOUR EQUIPMENT GUIDE

ON PULVERIZING GRINDING MIXING COMPOUNDING SIFTING



Also ask for bulletins on Abbe' Blenders, Pulverizers, Breakers, Crushers and Jar Rolling Machines

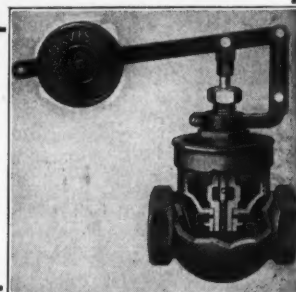
Your file on chemical processing isn't complete without this catalog of Abbe' milling, mixing or sifting equipment. You will want to know how these modern production machines can help speed the output of important war materials and cut costs as well. Abbe' Engineering Co., 40 Church St., New York, N. Y.

Write for Any or All These Catalogs

When inquiring specify CEP4906 — see information request blank, pgs. 2-3

The DAVIS No. 61 Fluid Control Valve

NO STICKING
•
NO HUNTING
•
NO WATER HAMMER
•
TIGHT CLOSING
•
EASY OPENING



SMOOTH flow control, plus the positive, tight-closing action of a single-seated, pilot-stem valve! The Davis No. 61 Valve has a multitude of uses where low maintenance and trouble-free service are important. Sizes from 1/2" to 12" in globe or angle pattern. No internal packing. Renewable valve disc. Write today for complete information.

DAVIS REGULATOR CO., 2562 S. Washtenaw Ave.

Chicago, Ill.

Valve Specialties Since 1875



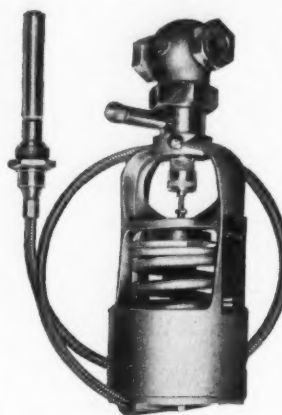
**DAVIS
REGULATOR CO.**

When inquiring specify CEP4907 — see information request blank, pgs. 2-3

INSTRUMENTS

Non-Indicating Controller in Temperature, Pressure Models

Compact, simple construction; tube system is easily interchanged



NON-INDICATING
CONTROLLER . . . in compact,
efficient unit

Control valve in the steam line. Temperature and pressure models in a number of convenient ranges are available in this controller.

C. J. TAGLIABUE MFG. CO., Dept. CEP, Park & Nostrand Aves., Brooklyn, N. Y.

Uses — Designed for use in the majority of automatic control operations.

Features — Simple construction, exceptionally compact, which does not effect the interchangeability of the tube systems, which is easily accomplished.

Description — The smallest change of temperature at the bulb is transmitted positively and with precision to the ball air valve through the transmitting spring level that multiplies the movement of the powerful capsular spring. The air valve, in turn, resets the rate of flow through the diaphragm-actuated control

When inquiring specify CEP4908 — see information request blank, pgs. 2-3

Liquid Handling Equipment and Flow Indicating Devices to Speed Production

Attractive four-page folder appropriately has a red, white and blue color scheme in presenting illustrations and details emphasizing the part of liquid handling equipment in the production drive. Pressure units, dispensing tanks, filtration sterilizing units, measuring pumps are just a few of the numerous products shown. Of related interest is an 8-page booklet devoted to the subject, "Flow Indicating Devices" contains specifications, descriptions and illustrations of this equipment. Either or both of these booklets are available on request.

S. F. BOWSER & CO., INC., Dept. CEP, Ft. Wayne, Ind.

When inquiring specify CEP4909 — see information request blank, pgs. 2-3

Have You A New Product?

If you have recently developed a new or improved product, a piece of laboratory or plant equipment or a new material, of specific interest in any line of chemical and process manufacturing . . . send it to our Editors. Through CHEMICAL EQUIPMENT PREVIEW'S editorial pages they will introduce it to this great field . . . with more than 27,000 copies of this publication covering every plant. This service costs you nothing, and there is no obligation. Write—The Editors.

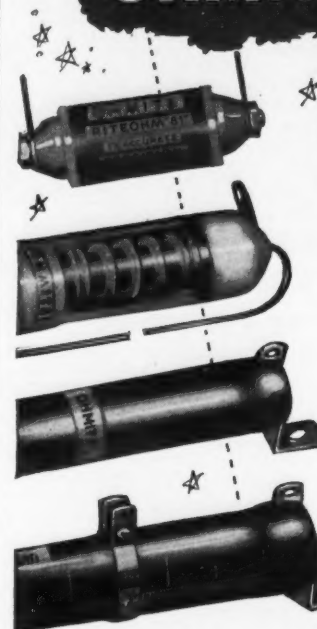
CHEMICAL EQUIPMENT PREVIEW
737 N. Michigan Avenue

Chicago

Illinois

For Today's Critical Applications

OHMITE RESISTORS



PROVED PERFORMANCE makes Ohmite Wire-Wound Resistors a logical choice for laboratory, industrial, and military applications. They stay accurate, dissipate heat rapidly, withstand atmospheric effects, prevent burnouts and failures, save time and trouble. Precision, non-inductive, fixed, adjustable and other types in stock or special units to meet every requirement. Units produced to Government specifications.



Write on company letterhead for Catalog and Engineering Manual No. 40.

OHMITE MFG. CO., 4918 FLOURNOY ST., CHICAGO, U.S.A.

When inquiring specify CEP4910 — see information request blank, pgs. 2-3

TRAPPED!

DUST PARTICLES SO SMALL
that 300 BILLION
WEIGH LESS THAN YOUR
FAVORITE CIGARETTE



HARMFUL dust particles range between 0 and 20 microns in size. Just how small is that? According to eminent authorities it takes in the neighborhood of 300 billion of these particles to weigh one gram, or roughly the weight of a cigarette!

To control particles as infinitely small as these requires a dust collector of exceptionally high efficiency. But, small as they are, such particles cannot escape the arresting action of Dustube cloth bag type dust collectors.

Results in hundreds of applications prove that Dustubes meet the most exacting requirements. EFFICIENCY BY WEIGHT: 98% and more; EFFICIENCY BY DUST COUNT: discharged air shows less than ten million particles per cubic foot from 2 to 10 microns in size, (as determined by the impinger method).

Write for new Dustube Catalog No. 62.

AMERICAN FOUNDRY EQUIPMENT CO.

573 S. Byrkit St.

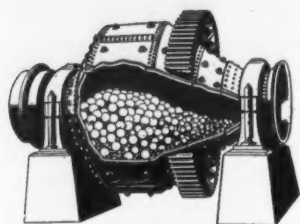
Mishawaka, Ind.

**DUSTUBE
DUST COLLECTORS**

When inquiring specify CEP4911 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

Pulverizing Mills



Hardinge Tube and Rod Mills, Conical Ball and Pebble Mills for Wet or Dry Grinding in Open or Closed Circuit.

Equipped with Hardinge Reversed Current Air Classifiers for Closed Circuit Dry Grinding or With the Counter-Current or Hydro Classifier for Closed Circuit Wet Grinding.

"Electric Ear" Sound Control Unit For Maintaining Mill at Maximum Efficiency.

Writes for Bulletins

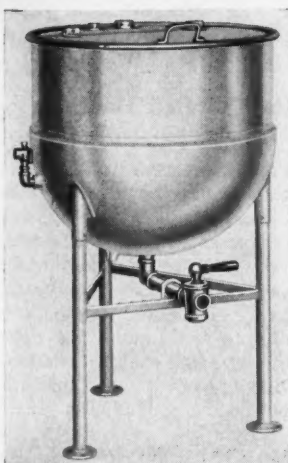
HARDINGE

COMPANY, INCORPORATED - YORK, PENNSYLVANIA
NEW YORK, CHICAGO, SAN FRANCISCO, TORONTO

When inquiring specify CEP4912 — see information request blank, pgs. 2-3

ANSWERING THE MATERIALS PROBLEM

THE NEW GROEN Defense Kettle



A MODEL DESIGNED FOR TODAY

Typically GROEN Quality from top to bottom. Identical in features with our famous 2/3 Jacketed Stainless Steel Models... but constructed of Stainless Steel-CLAD material so the entire inner surface of body, and the cover, are Stainless Steel... an idea GROEN pioneered to conserve critical materials.

AN APPROVED KETTLE

Uses only a fraction of the chrome and nickel usually required. Conforms to U. S. Navy specifications. All the sanitary features of our Stainless Steel kettles. Same dairy-type draw-off. Jacket and stand of steel. Outer surface brilliant in sanitary heat-resisting enamel. Get details.

SEND FOR OUR NEW KETTLE CATALOG

Shows the best in modern kettle design. See it before buying. Ask for a copy today.

All GROEN Models made in Stainless Steel-CLAD material. If your requirements are covered by the necessary priority, we'll do our best to serve you promptly.

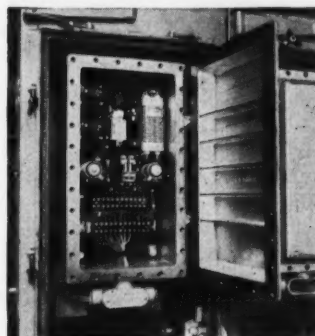
GROEN MFG. CO. (HALF A CENTURY)
OF FINE KETTLES
4532 West Armitage Avenue, CHICAGO, ILLINOIS

When inquiring specify CEP4913 — see information request blank, pgs. 2-3

INSTRUMENTS

Switchgear Has Sealed Protection

Metal-clad equipment has neoprene covered gaskets for gas resistance; explosion proof construction; corrosion-resistant finish



EXPLOSION-PROOF BOX . .
houses control equipment

Uses — Especially designed for oil refineries and other locations where switchgear may be subject to corrosive and hazardous atmospheres; for indoor or outdoor installation.

Features — Removable front and rear panels are fitted against a neoprene-covered felt gasket retained in a protecting channel, thus

combining the compression qualities of felt with the gas-resisting qualities of neoprene. Junctions between floor plate, side sheets and top cover are sealed with compound retained in built-in channels. Construction of the complete housing is as an individual unit, facilitating addition of circuit units. Secondary control devices are mounted within each enclosure in a separate explosion-proof box. This consists of a heavy, reinforced cast box sealed to insure complete protection of the operating equipment. The oil circuit breaker can be raised or lowered to the connected or disconnected position without opening the front door. A window in the door allows the operator to determine visually the position of the circuit breaker. An interlocking arrangement prevents lowering or raising a closed circuit breaker. External surfaces of the equipment have a special corrosion-resistant finish, and the inner surface of the roof and side sheets are lined with pulverized cork to prevent troublesome condensation.

Description — This vertical lift type switchgear is available in ratings up to and including 15,000 volts, with breaker ratings as high as 500,000 kva to control incoming lines, feeders and motors.

GENERAL ELECTRIC CO., Dept. CEP, Schenectady, N. Y.

When inquiring specify CEP4914 — see information request blank, pgs. 2-3

Temperature Control Systems for Fuel Fired Furnaces

Twelve-page, two-color booklet covers a full line of electric motor valve operators as applied to standard temperature control systems for fuel fired furnaces. Data is fully tabulated, wiring diagrams are provided, and recommendations are made for the use of valve operators and control valves and relays for application to two-position, three-position, relator or balancer control systems. Copies of catalog A14 may be had upon request.

AUTOMATIC TEMPERATURE CONTROL CO., Dept. CEP, 34 E. Logan St., Philadelphia, Pa.

When inquiring specify CEP4915 — see information request blank, pgs. 2-3

If you are a responsible process executive **CHEMICAL EQUIPMENT PREVIEW** will be sent to you personally if you request the publishers to do so . . . there will be No Charge. See request slip between pages 70 and 71.



KALAMAZOO PLATING CO. STANDARDIZES ON FAIRBANKS-MORSE MOTORS

For months the Kalamazoo Plating Co. has been following a motor standardization policy formulated to insure against future interruptions of production. Whenever an old motor burns out or needs major service, it is replaced with a Fairbanks-Morse Totally Enclosed Fan-cooled Motor with the exclusive Coperspun Rotor.

In less than one year, 27 of these long-lived F-M Motors have been installed. Sizes range from 1/2 to 30 hp. The motors drive blowers, automatic polishers, polishing lathes, light- and heavy-duty conveyors, and pumps.

A thorough investigation of available motors, of course, preceded the decision to standardize on F-M Motors. The company's engineers concluded that these motors were the answer to their rigid specifications—that F-M Motors would give the required consistent, efficient, and economical performance in continuous service, day in, day out.

In your plant, too, dependable, long-lived Fairbanks-Morse Motors will insure against production interruptions, and will speed production because they ask no nursing. You don't have to ask your men to go easy on starting, stopping, and reversing F-M Motors. They're built to take it!

Use your priority to get motors that will serve you best not only now but also throughout the years to come. Ask for a demonstration—a chance to compare F-M with any other motors, construction point by point. Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago.

When inquiring specify CEP4916 — see information request blank, pgs. 2-3

ALSOP "Hy-Speed" MIXERS

DO YOUR JOB BETTER



MIXING—All kinds of liquids and semi-liquids, completely and perfectly.

TYPES MADE—PORTABLE, to fit any container
FIXED POSITIONS and
SIDE ENTERING AGITATORS for containers holding a few to several million gallons.

COMPLETE UNITS—Portable and Fixed Position types with Alsop Glass lined Tanks from 5 to 200 gallons capacity.

SPEEDS—Widest possible ranges both high and low.

ENGINEERING—Competent staff available to aid in recommending the correct mixer. 25 years experience with mixing problems.

LITERATURE—Mixer catalogue No. 941 shows all the newest types of mixers. Sent on request.

ALSOP ENGINEERING CORP.

7 ALSOP SQUARE

MILLDALE, CONN.

When inquiring specify CEP4917 — see information request blank, pgs. 2-3



Owen rehandling buckets consistently obtain capacity grabs of material and render long periods of service with exceptional freedom from repairs. Write for descriptive literature TODAY.

The OWEN BUCKET Company
7050 Breakwater Avenue • Cleveland, Ohio
BRANCHES: NEW YORK PHILADELPHIA CHICAGO BERKELEY, CAL.



When inquiring specify CEP4918 — see information request blank, pgs. 2-3

NEW LITERATURE . . .

The following literature has been issued recently by manufacturers of the products discussed and is available to process production executives on request. Address requests to the publishers by using handy request form, pages 2-3, or write to the manufacturers direct.

Silica Stone Tanks Are Acid Resisting, Durable

The quarrying fabrication, basic properties and application of silica stone are clearly and briefly described in a four-page illustrated folder. Its adaptability to such treatment as planing, turning, boring and hand splitting receive comment as well as its crushing and transverse strength. Its use in tank construction because of its acid resisting properties is indicated in numerous photos. Sectional drawing of typical silica stone tank installation provides additional data of practical value. Bulletin No. 19 is available on request.

CLEVELAND QUARRIES CO., Dept. CEP, Builders Exchange Bldg., Cleveland, Ohio.

When inquiring specify CEP4910 — see information request blank, pgs. 2-3

Priorities & Production Handbook

Sixteen-page booklet, "Priorities Mobilize Production for Victory," prepared and published by instrument manufacturer to assist in clarifying priority regulations, forms and the procedures to be observed. Typical subjects dealt with include; "Principles of the Priority System," "Securement of Materials for Manufacture," "Acceptance of Orders" and "Securing and Extending Priority Ratings." Reproductions of various forms and certificates also provide helpful information. Publishers state that permission is granted to reproduce any portion of the book. Available upon request.

MANNING, MAXWELL & MOORE, INC., Dept. CEP, Bridgeport, Conn.

When inquiring specify CEP4920 — see information request blank, pgs. 2-3

Industrial Wheel Line Includes Molded-on Tires of Rubber Substitute Compound

Industrial wheels with molded-on solid compound tires are included in a diversified line of steel wheels illustrated and described in a four-page, two-color folder. Advantages and applications of the compound in view of pneumatic tire restrictions and rubber shortage are explained, as well as its availability in oil resisting and static dissipating forms. Specification and selection tables for industrial spoke wheels with steel tires, cast semi-steel wheels, barrow wheels are provided. Folder is available upon request.

FRENCH & HECHT, INC., Dept. CEP, Davenport, Iowa.

When inquiring specify CEP4921 — see information request blank, pgs. 2-3

Combined Gas & Oil Burners

Gas and combined gas and oil burners, are described and illustrated in a four page bulletin which emphasizes the manner in which this equipment meets the most severe firing conditions. The advantages of the combined gas and oil burners are dealt with in detail as well as the operating principles of the gas burner rings and oil atomizers used in connection with these burners. Bulletin 203 available on request.

PEABODY ENGINEERING CORP., Dept. CEP, 580 Fifth Ave., New York, N. Y.

When inquiring specify CEP4922 — see information request blank, pgs. 2-3

Machining Monel, Nickel and Nickel Alloys

A new sixteen-page bulletin presents in a most comprehensive form information and instructions regarding the machining of Monel, "R" Monel, Inconel, "K" Monel, "KR" Monel and Nickel. Eighteen chapters include in their subjects such headings as mechanical properties, tool steel, cutting compounds drilling and reaming and other standard operations. Essential data concerning each subject dealt with as it concerns the various materials selected are given in numerous tables. Data on the mechanical properties of "KR" Monel have been added and the oversize allowances to obtain a clean finished machine surface have been revised. Data on the results of drilling tests conducted by nationally known companies are of particular interest. Bulletin T-12, just revised, is available upon request.

INTERNATIONAL NICKEL CO., INC., Dept. CEP, 67 Wall St., New York, N. Y.

When inquiring specify CEP4923 — see information request blank, pgs. 2-3

Oil Froth Wet Dust Collectors

A 36-page, descriptive catalog complete with engineering data provides most informative facts concerning the general aspects of dust control and collection. Highly detailed discussion and illustrations of the equipment referred to and the principles of the system it involves are presented. Text explains functions of numerous units and parts, includes charts showing space requirements in relation to capacity desired and presents solutions to two dust solution problems, representative of numerous plants. In addition to dealing with oil-froth wet dust collection, the catalog stresses the flexibility of the system in providing for combination dry salvage and elimination where it is desirable. Catalog 79 available on request.

C. O. BARTLETT & SNOW CO., Dept. CEP, 6200 Harvard Ave., Cleveland, Ohio.

When inquiring specify CEP4924 — see information request blank, pgs. 2-3

Advanced Packages, Powered Handling Equipment Comprise Efficient, Controlled System

Modern methods that meet the problems of handling industrial products, parts and equipment to insure prompt delivery, fewer damage claims, lower handling costs and easier inventory are impressively presented in booklet titled, "Unit Packaging." It contains 56 pages, is printed on fine coated stock and each important point in the recommended packaging procedure is clearly illustrated by photos of actual applications. The various applications of gas powered industrial trucks for handling and loading parts, products and equipment are shown, particularly in their relation to items packed by the modern unit packing method. Typical of some of the packing jobs cited are those of coil springs, exhaust tubes, clutches, carburetors, floor mats. Uses of a multiple-trip folding box are also shown for such articles as rubber parts, fans, pistons. A tray-pack shipping container is also shown in typical adaptations to unwieldy units. Booklet sent on request.

CLARK TRACTOR DIVISION, CLARK EQUIPMENT CO., Dept. CEP, Battle Creek, Mich.

When inquiring specify CEP4925 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

NEW LITERATURE

New "Bulk-flow" Conveyors for Handling Flowable Granular and Crushed Materials

A new 32-page catalog and data book on "bulk-flow" power-operated conveyor systems illustrates and describes the application of this distinctly new system to the continuous and positive conveying of flowable granular, crushed, ground or pulverized materials of a non-corrosive, non-abrasive nature. Contents includes diagrams showing paths of operation, lists of materials that can be handled and case studies including illustrations and performance data. This catalog features two new sizes of "bulk-flo" equipment introduced since the former number was issued. New catalog 2075 available upon request.

LINK-BELT CO., Dept. CEP, 307 No. Michigan Ave., Chicago, Ill.

When inquiring specify CEP4926 — see information request blank, pgs. 2-3

Gravity & Power Roof Ventilators

Presented to the user in a durable file folder for convenience and safety, this twenty-two page-and-cover catalog gives practical information covering almost all phases of ventilation by roof installed units. Considerable space is given to description and illustration of continuous units, covering the entire length of a building, multiple units, rotary ventilators, and forced ventilation units. Illustrations of actual installations demonstrate great adaptability of all this equipment to various types and sizes of roofs. Catalog is identified as 214. Included in the file folder with the catalog is a handy guide for estimating, containing a special chart, drawings and all essential data in handy tabulated form. This is numbered 215. Available in the convenient folder on request.

SWARTWOUT CO., Dept. CEP, 18511 Euclid Ave., Cleveland, Ohio.

When inquiring specify CEP4927 — see information request blank, pgs. 2-3

Glass Blocks in Industrial Construction

A series of three four-page bulletins provide a comprehensive story of these glass blocks and the many applications for which they have won favor. Each booklet describes and illustrates the manner in which glass blocks meet a basic requirement in plant construction or maintenance. The first is concerned with maintenance advantages of glass blocks, the second discusses light from the viewpoint of employee comfort and efficiency and the third the several insulating properties of these blocks. All three bulletins are profusely illustrated and include charts, diagrams, specifications of practical interest. Bulletins 1B-37,38,39 available on request.

OWENS-ILLINOIS GLASS CO., Dept. CEP, Toledo, Ohio.

When inquiring specify CEP4928 — see information request blank, pgs. 2-3

Junior Weight Operated Trap

Bulletin gives specifications, method of operation and applications of weight operated trap for automatically draining water and oil from compressed air after coolers, separators, receivers and similar equipment. Diagrams indicate dimensions and structural features of the single body size in which trap is furnished which is adequate for the majority of air applications, up to 125 lbs. pressure. Bulletin No. 341 available upon request.

W. H. NICHOLSON & CO., Dept. CEP, 181 Oregon St., Wilkes-Barre, Pa.

When inquiring specify CEP4929 — see information request blank, pgs. 2-3



*Stainless Steel
Fabrication*

TO A WARTIME PACE...

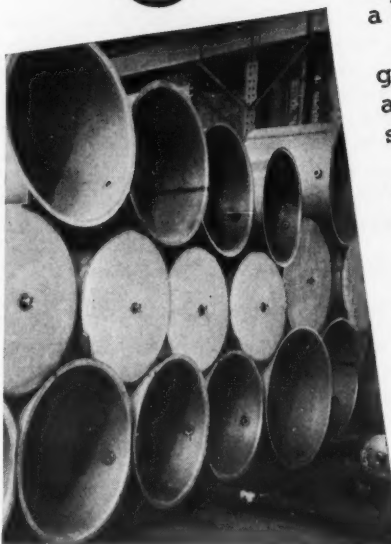
Next to time, stainless steel is perhaps the most critical material. If you need some stainless steel equipment in a hurry, Pfaudler can help you.

As pioneers in stainless steel fabrication, Pfaudler has gained the "know how" that means sound construction at a fast pace. We are constantly confronted with new designs and problems. But they have been solved. Coupled with this are years of metal fabricating experience in producing highly acid-resisting glass-lined steel equipment to the exacting requirements of the Chemical Industries.

So call in Pfaudler on your next requirement. Our engineering staff, our broad experience, our certified welders, our heat treating facilities and our understanding of metallurgy may mean the difference between success or failure in meeting your war production requirements.

P F A U D L E R

The Pfaudler Co., Rochester, N. Y. Branch Offices: 330 West 42nd Street, New York City; 1442 Conway Building, Chicago, Ill.; 1325 Howard Street, San Francisco, Cal.; 455 Paul Brown Bldg., St. Louis, Mo.; 7310 Woodward Ave., Detroit, Mich.; 1318-1st Natl. Bank Bldg., Cincinnati, Ohio; 1226 Commercial Tra. Bldg., Philadelphia, Pa.



When inquiring specify CEP4930 . . . see information request blank, pgs. 2-3

Steri Sealed STEEL CONTAINERS

-for
**FOODS
AND
CHEMICALS**

Special linings, laboratory tested under actual filling and storage conditions, assure that your product will reach the consumer in all its original freshness and purity.



Automatically controlled spraying and baking of linings assure uniformity. Containers are sealed immediately after processing and shipped to you ready for filling.

WILSON & BENNETT MFG. CO., CHICAGO, ILL.
Subsidiary of Inland Steel Company
Plants at Chicago, Jersey City & New Orleans. Warehouses in all principal cities.
Makers of Steel Drums and Pails

When inquiring specify CEP4931 — see information request blank, pgs. 2-3

FASTER! FASTER! FASTER! THANKS TO ACME SilverStitchers

Box stitching today must be done in more than double quick time! And it's being done in plants where the new, sturdily built, low cost Acme Silverstitchers are installed. And they're making all types of box stitching easier and more economical. Many times production of stitched cartons is doubled . . . costs reduced 50%. In addition, a stronger carton is assured. Acme Silverstitchers made in standard and in special sizes and types . . . to meet every carton stitching requirement.

ACME WIRE AND EQUIPMENT FUNCTION AS A UNIT

. . . that's why you are assured of better, faster stitching year after year. Both wire and equipment are supplied and GUARANTEED by Acme Steel Company. Write today for the facts on faster and better stapling . . . lower carton stitching cost. There is no obligation.

ACME STEEL COMPANY

2808 Archer Avenue, Chicago, Illinois
BRANCHES AND SALES OFFICES IN PRINCIPAL CITIES

When inquiring specify CEP4932 — see information request blank, pgs. 2-3

NEW LITERATURE

Direct Radiant Gas Firing in Various Branches of the Ceramic Industry

"A Factual Report on Direct Radiant Kiln Firing in Various Branches of the Ceramic Industry" summaries to date experience with a fundamentally new technique of kiln firing — the combustion of gaseous fuels "catalytically" on the concave surfaces of a multiplicity of incandescent ceramic cups distributed in pattern over the kiln walls without muffles, baffles or fire tubes between the burning gases and wear. Fourteen installations already made are analyzed, fourteen slides being included in the material. The report is a reprint of a summary prepared by the manufacturer issuing it for the 44th annual convention of the American Ceramic Society. Copies are available upon request.

THE SELAS CO., Dept. CEP, Erie & D St., Philadelphia, Pa.

When inquiring specify CEP4933 — see information request blank, pgs. 2-3

Vacuum Pumps and Auxiliary Equipment

A combined twenty-eight page catalog and hand book with heavy varnished cover presents a comprehensive review of vacuum processing and detailed information on the installation and operation of vacuum equipment. Almost every page from front cover to back contains large photographic illustrations of equipment and installations showing practical applications, such as drying and impregnating cables and loading coils, in processing chemicals. Auxiliary equipment also has its place and maintenance suggestions are given prominence. A de-vaporizer and portable high vacuum gauges are included in the equipment described. Catalog No. 38-P available upon request.

F. J. STOKES MACHINE CO., Dept. CEP, 5974 Tabor Rd., Philadelphia, Pa.

When inquiring specify CEP4934 — see information request blank, pgs. 2-3

Grinding Wheels & Abrasive Products

Comprehensive catalog on grinding wheels and other solid abrasive products presents specifications augmented with diagrams and sectional drawings. Pocket size, the material in its 90 pages is classified for ready reference. Four main sections are devoted to shellac bonded, rubber bonded, vitrified and silicate bonded and resinoid bonded wheels. All the various types in each classification are listed; straight, cylinder, cup, coping, cut off as well as special wheels, stones and hones. Available on request.

MID-WEST ABRASIVES CO., Dept. CEP, 2189 Beaufault St., Detroit, Mich.

When inquiring specify CEP4935 — see information request blank, pgs. 2-3

Lock Nut is One Piece All Metal Unit

A comprehensive six-page folder contains diagrammatic, photographic and factual matter concerning "An-cor-lox" lock nuts. Listed as a few of a wide variety of users are mines, oil refineries, engine and machine tool, hardware, electric and printing equipment manufacturers. Dealt with in detail are the lock's all metal self-contained construction, its availability in a full range of sizes and metallic alloys and vibration proof, self-locking and reusable features. Folder available upon request.

LAMINATED SHIM CO., INC., Dept. CEP, 84 Union St., Glenbrook, Conn.

When inquiring specify CEP4936 — see information request blank, pgs. 2-3

"Fleet-Fillet" Welding

Bulletin of 18 pages with cover, describes the new "fleet-fillet" method of welding. Fillet welding is briefly reviewed and compared with the new "fleet-fillet," technique. Text, photos and diagrams offer an impressive presentation of the different techniques as regards angle of electrode, weld penetration, weld strength, deposited metal and speed of welding for both single and multiple pass welds. Interesting statistics regarding the greatly increased speeds are emphasized. Bulletin 432 available on request.

LINCOLN ELECTRIC CO., Dept. CEP, Cleveland, Ohio.

When inquiring specify CEP4937 — see information request blank, pgs. 2-3

Rubber Shortage Makes Varnished-Cambric-Cable Welcome Substitute

A varnished-cambric-insulated cable is discussed from all aspects of its production, properties and applications in a two-color, twelve-page magazine style booklet. Illustrations and text clearly trace each step in the production, point out general advantage and specific uses. The various representative types in which the cable is available are illustrated and specifications given. Useful operating data and suggestions for wiring are included. Booklet GEA 2623 available on request.

GENERAL ELECTRIC CO., Dept. CEP, 1 River Road, Schenectady, N. Y.

When inquiring specify CEP4938 — see information request blank, pgs. 2-3

How to Run a Lathe

This 1942 edition of lathe operator's handbook, 5 1/8" by 8", 128 pages, has many changes and additions in text and illustrations. Contains latest information on operation and care of metal working lathes. Subjects include grinding cutter bits, making accurate measurements, plain turning, chuck work, taper turning, boring and practically all other operations. Written clearly and concisely. Handbook available at 25c a copy.

SOUTH BEND LATHE WORKS, Dept. 285, South Bend, Ind.

When inquiring specify CEP4939 — see information request blank, pgs. 2-3

Where Should Heat Treating Heat Go?

Four-page folder is devoted to detailed description of electric salt bath furnaces. Posing the question "where should the heat go?" the text, augmented by diagrams, concerns itself with the great importance of where electrodes are placed. Also described are pots and furnaces for hardening of "moly" and high speed steels. Bulletin U-4 sent on request.

UPTON ELECTRIC SALT BATH FURNACE DIV., Dept. CEP, 7456 Melville at Green, Detroit, Mich.

When inquiring specify CEP4940 — see information request blank, pgs. 2-3

Flocculation Mixers

A large, six-page broadside features a spread of photos and numerous smaller pictures showing installations of slo-mixers and flash-mixers in various sewage and water treatment plants. The principles of the system which the use of this equipment makes possible is clearly described. Bulletin 389 available on request.

CHAIN BELT CO. OF MILWAUKEE, Dept. CEP, Milwaukee, Wis.

When inquiring specify CEP4941 — see information request blank, pgs. 2-3

Every day of every year—this Process Manufacturer Dishes it out to his Clevelands!

The largest Manufacturer in his division of the Process Industry—now fully engaged in War production—has more than 100 Cleveland Worm Gear Speed Reducers that have never let him down.



His statement "Clevelands help us avoid shutdowns" is an extra-fine tribute—

For not only must he run his plants day and night, but must keep each machine working continuously.

Even a brief shutdown could stop operation for weeks!

Put your peak loads on Clevelands. They can "take it!"

The Cleveland Worm & Gear Company, 3257 East 80th Street, Cleveland, Ohio.

Affiliate: The Farval Corporation, Cleveland, Manufacturers of Centralized Systems of Lubrication.

In Canada: PEACOCK BROTHERS LIMITED



When inquiring specify CEP4942 — see information request blank, pgs. 2-3

Fines are profitable
PAY DIRT

PARSONS
OVAL BAG
DUST ARRESTORS
pay their way

There are hundreds of cases where Parsons Oval Bag Dust Arrestors actually pay for themselves in no time with the "fines" collected. Once installed Parsons Oval Bag Dust Arrestors start increasing production right "off the bat" and on top of that they protect employees, machinery and plant and make it a better place to work in—clean and pleasant. For the past quarter of a century many new and exclusive features have been developed by Parsons engineers and today as never before Parsons "Ovals" are head and shoulders above the field.

PARSONS
ENGINEERING CORPORATION
CLEVELAND, O.

When inquiring specify CEP4943 — see information request blank, pgs. 2-3

NEW LITERATURE

Solutions for 21 Common Lighting Problems

A new manual on lighting, just issued, is designed to provide executives, plant managers and others with the latest information on the best methods of using lighting economically and effectively as part of the production drive. The main section of the book is devoted to the solutions of 21 lighting problems most frequently encountered in plants converting to war production. Discussion is presented in non-technical language and illustrated by diagrams and layouts. All this information has the widest practical application. Methods for analyzing lighting requirements are outlined as well as the selection of equipment. Both incandescent and fluorescent requirements are dealt with. Manual is available upon request.

BENJAMIN ELECTRIC CO., Dept. CEP, Des Plaines, Ill.

When inquiring specify CEP4944 — see information request blank, pgs. 2-3

Pictures Show Contour Machine Operations

A handsome 8½ by 11 in. book, printed on fine coated stock and with plastic binding presents in impressive fashion the many applications of a metal removing machine of special design. Clear cut action photos, often nearly full page, show this contour machine at work in many industries. Among the operations dealt with are band sawing, band filing, polishing, sheet metal stamping, polishing plastics, making copper filings and shaping in three dimensions. Pictures of sectional views of the equipment showing transmission, power plant, saw and saw guides and magnifying attachment are included. The book bears the title "Doalls On Production," and is available upon request.

CONTINENTAL MACHINES, INC., Dept. CEP, Minneapolis, Minn.

When inquiring specify CEP4945 — see information request blank, pgs. 2-3

Reversible Lubricating System Needs But One Visible Indicator at Pump

Four-page, 8½ by 11 in. bulletin, printed in two colors and perforated for standard ring binder describes in detail a centralized reversing lubricating system for conveyors, cranes, crushers, machine tools, textile machinery and other industrial installations. A schematic drawing together with photos of electric motor driven pump and reservoir unit augments the concise text which traces each step in the operation of the system. Piping layouts, piston operated feeders, single visible indicator at pump, flow of lubricant in complete circuit and reversible flow feature are all given detailed attention. Bulletin 423 available upon request.

TRABON ENGINEERING CORP., Dept. CEP, 1814 East 40th St., Cleveland, Ohio.

When inquiring specify CEP4946 — see information request blank, pgs. 2-3

Centrifugal Blowers

76-page catalog devoted to these blowers is divided into two sections. Section 1 comprises 20 pages, is printed in two colors and features many photos of the blowers showing various drive arrangements and discharges and application of the equipment to air conditioning, ventilating and heating. Part 11 contains 40 pages of engineering data and capacity tables covering performances of these blowers. In addition 16 pages are devoted to dimension drawings illustrating 78 different views.

AUTOVENT FAN & BLOWER DIV., HERMAN NELSON CORP., Dept. CEP, 1811 No. Kostner Ave., Chicago, Ill.

When inquiring specify CEP4947 — see information request blank, pgs. 2-3

STOP Liquid Splashes-Sparks Flying Particles

with this
2-WAY DEFENSE PROGRAM

★ There is no "give" in this CESCO No. 750 General Utility Face Shield, which accounts for its ability to "take" and shunt off splashes, sparks and flying particles in the chemical process and metal fabricating industries. Extremely light in weight, with entire window metal bound for added strength and rigidity.



**CESCO No. 750
FACE
SHIELD**

enables its wearer to proceed aggressively, confident of working with the utmost in face and eye protection and comfort.

New CESCO No. 94 RESPIRATOR

Here is a respirator that FITS better, offers more COMFORT to the wearer! Carries a new Approval by the U. S. Bureau of Mines (No. BM-2142) for protection against Type A (Silica) — Lead and Nuisance Dusts. Unusually large filtering area (40 sq. in.) promotes easier breathing. New Exhale Valve with speaking diaphragm permits a normal exchange of conversation. Function with a high degree of efficiency against all common dusts, making it unnecessary to change filters under average working conditions. Get special circular today. Write.



CESCO No. 94 Respirator

CHICAGO EYE SHIELD CO. 2337 Warren Blvd.
Chicago • Illinois

When inquiring specify CEP4948 — see information request blank, pgs. 2-3

**KEEP 'EM
MOVING ON
LINK-BELT
CARRIER
CHAINS**

● They assure uninterrupted production by their dependable, low-cost service. Made in a number of standard sizes and in metals to suit conditions . . . for supporting, pushing and moving a great variety of articles. Link-Belt Chain Engineers have helped solve conveyor and drive problems in many industries.

LINK-BELT COMPANY
Indianapolis, Chicago, Philadelphia, Atlanta, Dallas, San Francisco, Toronto.

Silverlink Flat-Top Conveyor Chain for horizontal travel, articulates freely and prevents "humping".

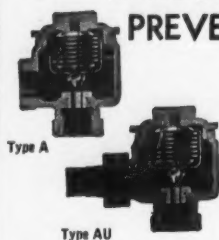
Crescent Conveyor Chain with cast attachments for conveying in rectangular, circular, semi-circular or snake-like path.

Universal Carrier Chain is accurately made, extremely flexible, and operates in rectangular, circular, semi-circular, or irregular paths.

No. 4250 Swivel Chain is quickly detachable, extremely flexible for conveying cases, cartons, crates, and operates around horizontal curves as small as 12" radius in a 2" channel track.

When inquiring specify CEP4949 — see information request blank, pgs. 2-3

Quick SNAP ACTION PREVENTS STEAM WASTE



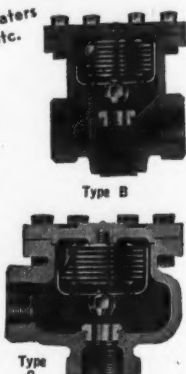
Nicholson Traps need but a few degrees differential between steam and condensate to open valve. Completely and automatically drain without steam loss.

Specify NICHOLSON TRAPS
for Better Drainage of Unit Heaters
Pipe Coils, Water Heaters, etc.

NO AIR-BINDING . . . no adjustment . . . no dribbling . . . no freeze-ups (types A, AU and C drain completely when cold, hence cannot freeze.) Two to six times greater capacity than average traps. Increase process production as much as 30%. Five types, sizes 1/4" to 2". Immediate delivery. Bulletin No. 242.

W. H. NICHOLSON & CO.
161 OREGON ST., WILKES-BARRE, PA.

Piston and Weight Operated Steam Traps, Compressed Air Traps, Gasoline Traps, Steel and Stainless Steel Floats, Flexible Couplings, 2-3 and 4-way Valves, Compression Shaft Couplings, Expanding Mandrels, Arbor Presses, Steam Eliminators and Separators.



When inquiring specify CEP4950 — see information request blank, pgs. 2-3

AIR RAID PRECAUTION EQUIPMENT



INCENDIARY BOMB SCOOP

Specially designed scoop of heavy gauge steel, on 8-foot ash pole. Permits disposal of incendiary bombs at safe distance from heat and glare. Fully tested. Furnished with ample supply of Magout Powder (see below) at reasonable cost.

MAGOUT POWDER for Magnesium Fires

Quickly, effectively smothers fires of Magnesium bombs, or Magnesium shavings in machine shops. Furnished in handy tubes, or bulk. Keep a supply on hand — does not deteriorate. Very inexpensive.

PULMOSAN SAFETY EQUIP. CORPORATION

DEPT. EP, 176 JOHNSON ST. BROOKLYN, N. Y.
When inquiring specify CEP4951 — see information request blank, pgs. 2-3

STRETCHERS.

Made of sturdy 12 oz. Khaki, on ash poles 7 ft., 6 in. long. Reasonably priced. Immediate shipment.

**ASBESTOS SUITS
GLOVES, HOODS
GLAREPROOF GOGGLES**
Write for details
and prices

NEW LITERATURE

Testing and Control of Foundry Sand

A plastic-bound catalog, pocket size, devotes its 100 odd pages to a complete description and many illustrations of a large variety of foundry sand testing and control equipment. Each number in the line is given one or more pages in the book. For easy reference the material is presented in several sections, specifications and illustrations, price list, operating instructions and technical data. The last section presents in a clear and concise manner the selection, testing and handling of foundry sands and includes a casting defect chart tabulating the types of mold conditions which may cause various casting defects charged to sand and the method of remedy.

HARRY W. DIETERT CO., Dept. CEP, 9330 Roselawn Ave., Detroit, Mich.

When inquiring specify CEP4952 — see information request blank, pgs. 2-3

Industrial Air Conditioning & Drying

The scope of industrial air conditioning and the maintenance of proper temperatures as they apply to various industries is interestingly discussed in a new 18-page, magazine-style booklet. Numerous illustrations of installations in widely varying industrial fields serve to emphasize the many technical points concerned. A large portion of the text is devoted to a presentation of the various factors to be considered before the installation of any air conditioning equipment. Bulletin 210 sent on request.

J. O. ROSS ENGINEERING CO., Dept. CEP, 350 Madison Ave., New York, N. Y.

When inquiring specify CEP4953 — see information request blank, pgs. 2-3

Scale Prints Ticket While Item Is Weighed

Two color illustrated folder of four pages describes "Printweigh" scales that print weight figures on tickets or sheets of any size or on continuous strips or a combination of both; with duplicate copies. Photos of actual installations show how these scales print the accurate weight at the time the item is on the scale platform. The speedy action and operating principles of the printwheel, which is directly a part of the scale mechanism, not an attachment, are dealt with in detail. Folder available upon request.

TOLEDO SCALE CO., Dept. CEP, Toledo, Ohio.

When inquiring specify CEP4954 — see information request blank, pgs. 2-3

Respirators and Goggles

A price list including numerous illustrations and complete specifications on sponge and cloth, twin cartridge and several double filter type respirators, recently issued also illustrates and describes gas-tight, fog proof rubber goggles. Unit prices as well as those for all individual parts for replacement purposes are given. Available on request.

H. S. COVER, Dept. CEP, Station A, South Bend, Ind.

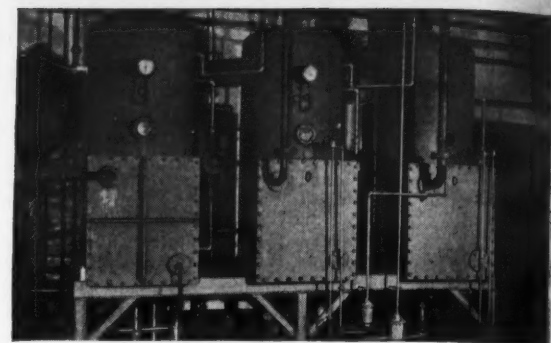
When inquiring specify CEP4955 — see information request blank, pgs. 2-3

Technical Book Catalog

48-page booklet lists scores of books covering subjects on a wide variety of subjects—chemistry, paints and dyes, electricity, food, metals and their treatment, analysis and testing, biology, medicine and health, etc. Each book is concisely described and price shown. Booklet is well indexed for easy use. Catalog is available on request.

CHEMICAL PUBLISHING CO., Dept. CEP, 234 King St., New York, N. Y.

When inquiring specify CEP4956 — see information request blank, pgs. 2-3



Stokes Multiple-Effect Water Stills

Pay for themselves in 24 months or less

Stokes Multiple-Effect Stills are designed and built by chemical engineers to meet individual requirements. They produce water of the highest quality.

- with less than 3 to 5 parts per million total solids
- with electrical resistance of 300 to 600 thousand ohms
- with chlorine content less than 1 part in 10 million and to otherwise meet the most rigid specifications.

The triple-effect, 300-gal. still as shown above will save \$3,000 or more per year in water and steam, as compared with a single-effect unit it displaced.

Stokes Water Stills are the result of our more than 40 years' experience in the manufacture of specialized processing and scientific equipment. More than 18,000 are now in use. Write for new, complete catalog.

F. J. STOKES MACHINE COMPANY

5974 Tabor Road Olney P. O. Philadelphia, Pa.

F.J. Stokes



When inquiring specify CEP4957 — see information request blank, pgs. 2-3



● The Kathabar System accurately and automatically controls air moisture for processing and comfort applications. Many installations in the country's leading food and chemical plants have created more efficient, economical and profitable results through the conditioning of atmospheres. Easy to operate. Just set one control and the Kathabar System gives you the desired processing or working atmosphere condition. "See-Saw" humidity costs you money. Eliminate this with Kathabar.

{ Send for free literature giving applications and operating data. }

Kathabar
SC
CONTROLLED ATMOSPHERES

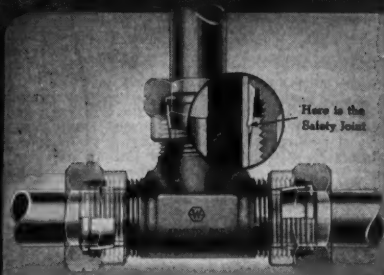
SURFACE COMBUSTION • TOLEDO, OHIO

When inquiring specify CEP4958 — see information request blank, pgs. 2-3

If the tubing will carry the pressure

ERMETO WILL HOLD IT

★
NO
FLARING
THREADING
WELDING
OR
SOLDERING



★ Weatherhead Ermeto Safety Tube and Pipe Couplings answer the problem of connecting tubing without the necessity of flaring, threading, welding, or soldering.

With Ermeto Safety Fittings, connections can be made with practically all types of tubing materials. These connections will hold up beyond the burst strength of the tube itself. Exhaustive tests have also proved the superior qualities of Ermeto in the ability to withstand vibration without loss of tightness of the joint.

Ermeto fittings have wide applications on hydraulic lines, oiling, water, gas, fuel and air lines.

Write for samples and complete details.

THE WEATHERHEAD CO., 300 E. 131st Street, Cleveland, Ohio

WEATHERHEAD

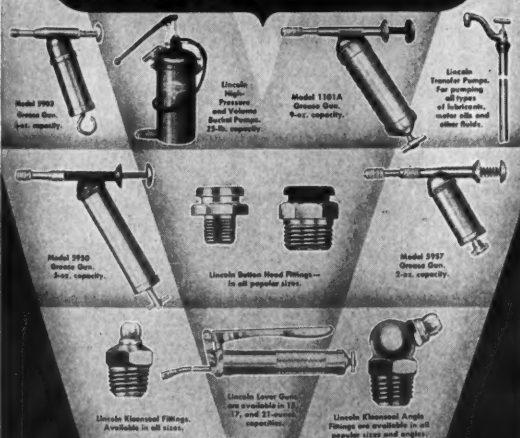
TUBE FITTINGS • FLEXIBLE HOSE • VALVES • DRAIN COCKS
AVIATION, AUTOMOTIVE AND REFRIGERATION SPECIALTIES

When inquiring specify CEP4959 — see information request blank, pgs. 2-3

LINCOLN

Makes a complete line of
LUBRICATING EQUIPMENT AND FITTINGS

Hand-Operated Grease Gun, High-Pressure and Volume Type Bucket Pumps, Lever Guns, Transfer Pumps, Kleenseal and Button Head Fittings—everything for lubricating machinery having bearings requiring grease lubrication. A few of the many items are illustrated here.



WRITE FOR CATALOG NO. 71

LINCOLN ENGINEERING COMPANY

Pioneer Builders of Engineered Lubrication Equipment - St. Louis, Mo., U. S. A.

When inquiring specify CEP4960 — see information request blank, pgs. 2-3

NEW LITERATURE

New Babbited Bearing Pillow Blocks for Moderate Speed and Power

Four-page, large size folder gives complete specifications on this streamlined babbited bearing pillow block. Table gives all dimensions of the various sizes in which these blocks are supplied ranging from 1/2" to 3" diameter shaft size, 24 in all. Large illustration of one of these pillow blocks in actual size and maroon color is interestingly used with captions to emphasize features of construction and design. Folder 1865 available on request.

LINK-BELT CO., Dept. CEP, 307 No. Michigan Ave., Chicago, Ill.

When inquiring specify CEP4961 — see information request blank, pgs. 2-3

Metallizing Aids Machine Maintenance

16-page bulletin describes metallizing equipment and the various applications of the process. Tells briefly how various industries are eliminating replacements, increasing service life of equipment. Also explains how metallizing is used to salvage mismatched parts and defective castings and how metallized coatings conserve vital metals. Bulletin 42 A sent on request.

METALIZING ENGINEERING CO., Dept. CEP, 21-07 41st Ave., Long Island City, N. Y.

When inquiring specify CEP4962 — see information request blank, pgs. 2-3

Conservation of Precision Equipment

A series of folders emphasizing the importance of including proper care of precision instruments in our national conservation program is now being issued. Published monthly, each folder deals with the maintenance of one type of equipment. Among those recently distributed are "How to Make Safety and Relief Valves Last Longer," "How to Make Your Thermometers Last Longer," and a similar folder on globe valves. These are available upon request.

MANNING, MAXWELL & MOORE, Dept. CEP, Bridgeport, Conn.

When inquiring specify CEP4963 — see information request blank, pgs. 2-3

Ball, Rod & Tube Mills

Twenty-page, large size catalog presents practical discussion of grinding methods and a diversified line of ball, rod and tube mills for wet or dry grinding of metalliferous ores, cement, rock and comparable materials. Charts and tables covering power requirements, ball charges, weights and quantities of balls and illustrations and sectional drawings of various units comprise the main sections. Bulletin No. 201 available on request.

EIMCO CORP., Dept. CEP, Box 300, Salt Lake City, Utah.

When inquiring specify CEP4964 — see information request blank, pgs. 2-3

Single and Two Bolt Mounting Vibrators

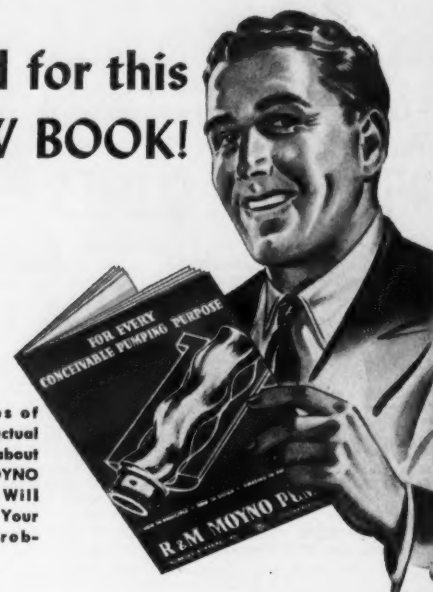
Bulletin gives complete specifications on single and two-bolt mounting vibrators. The various sizes and styles are illustrated as well as such accessories as blow and shut-off valves, hose end nipples, knee valve and vibrator hose connection. Bulletin C-3 available on request.

CANNON VIBRATOR CO., Dept. CEP, 1111 Power Ave., Cleveland, Ohio.

When inquiring specify CEP4965 — see information request blank, pgs. 2-3

If you use Pumps

**Send for this
NEW BOOK!**

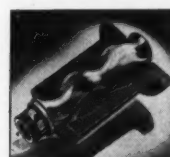


Eight Pages of
Practical, Factual
Information about
the R & M MOYNO
PUMP that Will
Help Solve Your
Pumping Problems!

If you're looking for a new, *different* type of pump that can do the job better and faster, with less maintenance and fewer pumping-trouble delays—send for this free book *now!*

It's a *brand-new* 8-page book, packed with practical information on the R & M Moyno Pump. Facts that show how its ability to handle heavy viscous and abrasive liquids can revolutionize pumping operations in *your* plant. It tells how the Moyno compares in *principle* with other types of pumps. How it is helping vital industries produce more—and at the same time improve product quality. How it has proved—feature by feature—to be the greatest pumping improvement in decades!

The entire book was written by R & M Moyno engineers who have spent many years solving the *toughest* pumping problems. If you don't need it for immediate reference, you'll want it later. It's yours free—mail coupon today!



ONLY 1 MOVING PART!

Here's the patented principle of the R & M Moyno Pump's amazing performance. A single-threaded helical rotor revolves in a double-threaded helical stator, providing pumping action like that of a piston moving through a cylinder of infinite length.

Moyno pumps are manufactured under R. Moineau patents

ROBBINS & MYERS, Inc., Moyno Pump Division, Springfield, Ohio

Please send me the new 8-page book on the R & M Moyno Pump.

Name.....

Firm Name.....

Address.....

Pump will handle.....

When inquiring specify CEP4966 — see information request blank, pgs. 2-3



EDMONT
Rubberized Fabric
INDUSTRIAL GLOVES

Synthetic "7" Industrial Gloves, developed by Edmont, are daily proving their superiority by actual work tests in leading industrial plants. They wear from two to four times longer than latex-coated gloves, and workers are finding them a lot easier on their hands and more efficient to work with.

Greater Flexibility Synthetic "7" Gloves are more pliable on the hands and give freer movement to the fingers.
High Resistance Synthetic "7" Gloves have high resistance to Oils, Grease, Solvents, Acids, Caustics, Corrosives, and Severe Abrasives.

Liquid Proof Synthetic "7" Gloves repel all types of corrosive liquids and offer complete protection to workers' hands.

No Snagging The strong fabric reinforcement makes Synthetic "7" Gloves virtually snag-proof — assuring extra long, economical service.

[NEOPRENE and RECLAIM-LATEX Coated Gloves]
 are also available in knit-wrist and gauntlet styles.

For description, samples, and prices, see leading distributors, or write

EDMONT MANUFACTURING CO.
 544 Orange Street, Coshocton, Ohio



When inquiring specify CEP 4967 — see information request blank, pgs. 2-3

SAFE MIXING



with **PNEUMIX** **AIR-MOTORED** **AGITATORS**

Eliminate fires and explosions with these spark-proof, splash-proof air motored agitators. A type and size for all mixing requirements. Direct or gear driven models.

Since 1908 manufacturers of spray equipment. May we fill your requirements.

Send for Bulletin

ECLIPSE AIR BRUSH CO.

393 Park Avenue Newark, N. J.

ECLIPSE



When inquiring specify CEP 4968 — see information request blank, pgs. 2-3

NEW LITERATURE

Two Stage Centrifugal Pumps

Twelve-page bulletin contains complete information and numerous illustrations concerning this line of two-stage centrifugal pumps. In addition to photos, are many cross sectional views, extensive performance tables and a comprehensive tabulation showing friction of water in various sizes of pipe. Both pictures and text provide interesting examples of the use of this equipment in numerous industries. Bulletin 7167 available on request.

INGERSOLL-RAND, Dept. CEP, 11 Broadway, New York, N. Y.

When inquiring specify CEP4969 — see information request blank, pgs. 2-3

Air Conditioning for Steel Mill Crane Cabs

Included in new material in revised 30-page, spiral bound catalog is detailed description of air-conditioning system designed especially to maintain comfortable temperatures in cabs of cranes used for hot metal operations. The particular requirements in installations for soaking pits, open hearth and Bessemer ladle cranes and stripper, mold preparation and recovery cranes are discussed. Other sections of the catalog are devoted to such steel plant equipment as sanders, crane signals, fire-extinguisher cabinets and indicator lanterns. Catalog E5 available on request.

LINTERN CORP., Dept. CEP, 60 Lincoln Ave., Berea, Ohio.

When inquiring specify CEP4970 — see information request blank, pgs. 2-3

How to Protect Priceless Hose

Detailed survey on hose maintenance contains many valuable suggestions for avoiding practices that result in unwarranted wear and proper methods of use in various applications. Care and preservation of such special types of hose as steam, hot water and steam washout hose, air, oxygen acetylene, paint, oil, gasoline and fire are discussed. Available on request.

UNITED STATES RUBBER CO., Dept. CEP, Rockefeller Center, New York, N. Y.

When inquiring specify CEP4971 — see information request blank, pgs. 2-3

Package Handling Equipment

Profusely illustrated catalog of 24 pages provides in condensed form general information concerning a complete line of conveyors and pneumatic tube applications for various industries handling packaged merchandise. It bears the title, "Standard Conveyors — Engineered to Meet All Package Handling Problems" and is available upon request.

STANDARD CONVEYOR CO., Dept. CEP, North St. Paul, Minn.

When inquiring specify CEP4972 — see information request blank, pgs. 2-3

Individually Calibrated Fuel Valves

Four-page folder describes line of fuel valves. Detailed drawings illustrate principles of operation and features of construction and design. Application to steel and allied industries emphasized. Individual calibration and cleaning features of valves are given special attention. Folder sent on request.

UNIVERSAL RIGBY VALVE WORKS, Dept. CEP, 627 Union Commerce Bldg., Cleveland, Ohio.

When inquiring specify CEP4973 — see information request blank, pgs. 2-3

American Industry stands FIRM on Dayton Safety Ladders and Ladder Shoes!

DAYTON UNIVERSAL LADDER SHOE
 Easily installed on your present straight ladders. Prevents slipping — guarantees additional safety for workmen. Your choice of Rubber Suction Grip Treads or Suberac Cork Treads. Shoe is instantly converted by flip of hand or foot for either inside use of Treads or outside use of tempered steel spike Toes.

DAYTON SAFETY LADDER
 These famous ladders save time — provide supreme Safety. Ordinary ladder hazards are eliminated. Nationally used by Industry, these Dayton Safety Ladders give confidence to workers. Features a broad platform with ample room for both worker, tools and supplies. Rigid steel supports, tested airplane spruce assure great strength, stability, lightness of weight. Equipped with Standard Rubber Safety Shoes at no extra cost. Write today for prices and free catalog

DAYTON Safety Ladder Co.
 121-123 W. Third St.
 CINCINNATI, O.

As Safe as Standing on the Floor

When inquiring specify CEP4974 — see information request blank, pgs. 2-3

John CRANE PACKINGS

SUPER-SEAL Plastic...NEW!
 with "Spring-back" Resilience

...A John Crane development... & all-purpose styles for steam, water, air, petroleum, chemical, foods... Potentiated tape-bonding prevents fracturing while installing... Dry-gasketed; anti-frictional; temperatures to 1000°F; for centrifugal boiler-feed and rotary pumps; low pressure steam rods; valve stems; expansion joints... Write for sample.

CRANE PACKING COMPANY, 1800 CUYLER AVE., CHICAGO
CRANE PACKING COMPANY, LIMITED, HAMILTON, ONTARIO, CANADA

When inquiring specify CEP4975 — see information request blank, pgs. 2-3

PROTECTION AGAINST PROFIT LEAKS



Many a manufacturer, after adopting Bemis Waterproof Bags, has found the answer to costly, annoying profit leaks. Replacements and allowances for loss of quality and quantity in transit and storage—loss of customers through dissatisfaction—these and many other profit leaks have been overcome by shipping in Bemis Waterproof Bags.

These Bemis shipping containers can be made to keep moisture in and dampness out—retain desirable aromas and repel objectionable odors—shut out dust and dirt—resist acids and grease. And because of their strength and toughness, Bemis Waterproof Bags provide extra protection against rough handling.

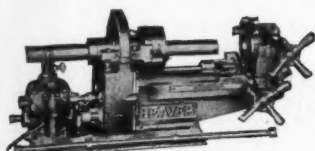


**WATERPROOF DEPARTMENT
BEMIS BRO. BAG CO.**

426 Poplar St., St. Louis, Mo. • 5128 Second Ave., Brooklyn, N. Y.

When inquiring specify CEP4976 — see information request blank, pgs. 2-3

The A-B-C of Pipe and Bolt Machines

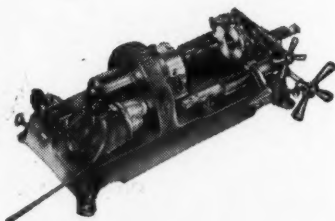


Beaver Model-A

A high-speed heavy-duty deluxe Pipe and Bolt Machine. Range 1/8 to 2-inch — up to 12-inch with geared tool and drive shaft. Bolts, 1/4 to 2-inch. Wt. 415 lbs. Ask for Bulletin-A.

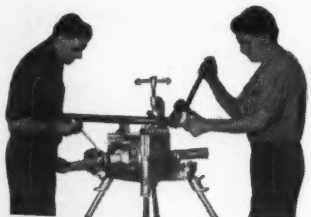
Beaver Model-B

A compact utility Pipe and Bolt Machine combining many features of Model-A with the easy portability of Model-C. Range 1/8 to 2-inch — up to 8-inch with drive shaft and geared tools. Bolts up to 1 1/2-inch. Wt. 280 lbs. Ask for Bulletin-B.



Beaver Model-C

A sturdy little Power Unit Converts Hand Pipe Tools into Power Tools from 1/8 to 8-inches. Threads 8-inch in 6 minutes. Threads bolts up to 1 1/2-inch. Equipped with automatic chuck wrench ejector—a safety feature. Two men can use it at the same time without interference. Easily portable—weighs about 150 lbs. Write for Bulletin-C.



BEAVER PIPE TOOLS

742 REVIEW AVE.

WARREN, OHIO

When inquiring specify CEP4977 — see information request blank, pgs. 2-3

JULY-AUGUST, 1942

NEW LITERATURE

Carburizing Methods & Equipment

Booklet of 26 pages and cover contains an unusually clear and comprehensive presentation of carburizing methods in describing the "homocarb" system. Concise text, interspersed with many illustrations shows a variety of heat treats, various types of work being carburized and tells how results are obtained. Diagrams, charts and photomicrographs complete the volume. Booklet T-623 available upon request.

LEEDS & NORTHRUP CO., Dept. CEP, 4907 Stenton Ave., Philadelphia, Pa.

When inquiring specify CEP4978 — see information request blank, pgs. 2-3

Cranes and Tramrail Systems

Numerous installations of advanced design crane equipment are described and illustrated in eight-page, tabloid size magazine. Extra large photos reproduced on fine coated stock vividly portray various applications of modern crane and tramrail equipment in plants producing rubber and clay products, steel processing, defense work and other essential operations. Included in the equipment shown is a tramrail window washing system. Issue referred to here is Vol. 1, No. 1 of the Graphic.

CLEVELAND CRANE & ENGINEERING CO., Dept. CEP, 1129 E. 283rd St., Wickliffe, Ohio.

When inquiring specify CEP4979 — see information request blank, pgs. 2-3

Combustion Safeguard Systems

Combustion safeguard systems of three distinct types are all discussed in non-technical language in a recently issued bulletin. Complete information on the flame electrode, automatic relite relay and photo electrode units is presented by generous use of large, clear photos showing interior views of the instruments and numerous schematic diagrams which, together with the clear concise text, describe applications to various types of boilers for protection against flame failure. Booklet 96-3.

BROWN INSTRUMENT CO., Dept. CEP, Wayne & Roberts Aves., Philadelphia, Pa.

When inquiring specify CEP4980 — see information request blank, pgs. 2-3

Adjusting Shake-out Strokes

Four-page folder contains many photographic illustrations and information concerning sand conditioning and reclaiming equipment. Operating requirements in connection with the length of the vibration stroke are discussed and the features of the equipment in this connection are clearly shown. Bulletin 442.

PRODUCTIVE EQUIPMENT CO., Dept. CEP, 2926 West Lake St., Chicago, Ill.

When inquiring specify CEP4981 — see information request blank, pgs. 2-3

1,000 Items in Electric Controls Catalog

Sixteen-page catalog presents in a ready reference style complete information on rheostats, resistors, tap switches, chokes and attenuators. There are many illustrations and detailed listings of ratings and prices. The wide range of stock types and sizes brings the total number of items included in the catalog to over one thousand. Catalog 18 available upon request.

OHMITE MFG. CO., Dept. 1C, 4835 Flournoy St., Chicago, Ill.

When inquiring specify CEP4982 — see information request blank, pgs. 2-3



EASTERN Midget PUMPS

"Exactly the Pump for Our Job"

That's what a plant executive told us recently. Why? Because we didn't "just sell" a pump. From our varied line we picked the model that fit the space available, was light in weight, and gave more than the required performance. Just let our capable engineers know your needs — they'll give you "exactly the pump" for your job. Write for complete information.

Eastern Engineering Company

49 Fox St.

New Haven, Conn.



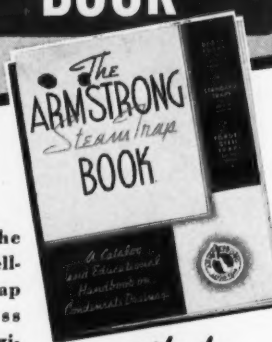
When inquiring specify CEP4983 — see information request blank, pgs. 2-3

*Answering
the
CALL-*

ARMSTRONG Steam Trap BOOK

*FOR TRAP
DATA:* DURING the present emergency the well-known Armstrong Steam Trap Book has saved countless hours for thousands of engineers engaged in planning and installing piping, heating, and drainage equipment in new and existing plants. We will be glad to send you a copy of the latest edition of this book without obligation!

write to
**ARMSTRONG
MACHINE WORKS**
880 Maple St.
Three Rivers, Mich.




When inquiring specify CEP4984 — see information request blank, pgs. 2-3

NEED MOTORS ?



4 THINGS TO DO TO GET THEM FASTER

TRI/CLAD
REG. U.S.
PAT. OFF.
MOTORS

Now available up to 100 hp in standard, open construction

- 1. Use standard motors.** Wherever possible, select standard, open, sleeve-bearing motors. Building fewer "specials" means faster and greater production of motors for you and others engaged in essential war work.
- 2. Place orders early.** Order the motors when you order, or plan for, the equipment they are to drive.
- 3. Send proper priority.** Be sure correct priority papers accompany your order and that the priority rating reflects the urgency of the motor's use in the war effort.
- 4. Check G.E. for warehouse stocks.** A supply of many standard motors is kept on hand to meet urgent war needs. Perhaps the motor you want, or can use with simple changes, is available for immediate shipment. General Electric, Schenectady, N. Y.

GENERAL ELECTRIC

When inquiring specify CEP4985 — see information request blank, pgs. 2-3

NEW LITERATURE

Snap Switches For Precision Control

Looseleaf-punched eight-page, two-color booklet tells the features, shows the construction and operation of these switches in drawings, plans, charts and photographs. Specifications and engineering data are given, there is a discussion of load conditions and how they affect switch operation, and these switches are covered: pin plunger type, overtravel type, hinged leaf actuator, hinged roller leaf actuator, leaf actuator, roller leaf actuator, aircraft types, open blade switches, and switches for special applications. Stock List No. 10 may be had upon request.

ACRO ELECTRIC CO., Dept. CEP, 3153 Fulton Rd., Cleveland, Ohio

When inquiring specify CEP4986 — see information request blank, pgs. 2-3

Determining Combined Nitrogen in Steel

A new, short and comparatively simple method of determining the combined nitrogen in steel is the subject of an article by a recognized steel authority. This method can be used by any steel laboratory. The time consumed is approximately twenty minutes for the first determination and successive ones come off the line at the rate of about one every seven or eight minutes. Reprints of this article entitled, "Determination of Combined Nitrogen in Steel" are available on request.

BURRELL TECHNICAL SUPPLY CO., Dept. CEP, 1936 Fifth Ave., Pittsburgh, Pa.

When inquiring specify CEP4987 — see information request blank, pgs. 2-3

Reconditioned Industrial Equipment

Catalog on "Reconditioned and New Equipment," 16 pages, 8½" by 11" illustrates and describes in detail a wide variety of industrial machinery. Arranged alphabetically, the type of equipment of particular interest is quickly located. The diverse selection includes agitators, ball mills, crushers, feeders, filters, pumps, screens and tanks. Catalog No. G-4200 available on request.

DENVER EQUIPMENT CO., Dept. CEP, 1400 17th St., Denver, Colo.

When inquiring specify CEP4988 — see information request blank, pgs. 2-3

Coal Scales with Dust-Tight Housing

Four page two color folder and magazine reprint sheet describe a unit for measuring out accurate amounts of coal. Eight special features are described, with accompanying photographs to emphasize them. Large illustrations show 200 lb. and 400 lb. scales, and magazine reprint has cut-away drawing to show operation of the machine. Booklet Form 15 is available upon request.

STOCK ENGINEERING CO., Dept. CEP, 9805 Theodore Ave., Cleveland, Ohio

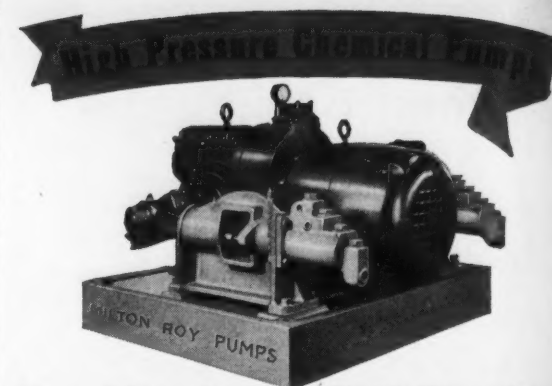
When inquiring specify CEP4989 — see information request blank, pgs. 2-3

"More Production, Better Morale"

"More Production, Better Morale," is a 16-page booklet, approximately 6" by 9" printed on fine book paper and with an attractive parchment cover. It discusses scientific production control methods particularly from the aspects of work evaluation, wage incentives, plant layout, training of supervisors and workers. Labor-management cooperation in determining correct controls and quotas is also dealt with.

THE BEDAUX CO., Dept. CEP, Chrysler Bldg., New York, N. Y.

When inquiring specify CEP4990 — see information request blank, pgs. 2-3



Non-Clogging . . . Self-Cleaning with Precise Volume Control

Here's the pump that does the "impossible" . . . handles solids in suspension such as salt slurries and textile fibres, liquid latex in rubber manufacture, refinery products, paints, etc. . . as well as practically all chemicals. Reason? The patented Milton Roy Step-Valve with its double-ball checks . . . the valve that is non-clogging, self-cleaning, minimizes wire-drawing, eliminates air-binding completely, has many other exclusive advantages.

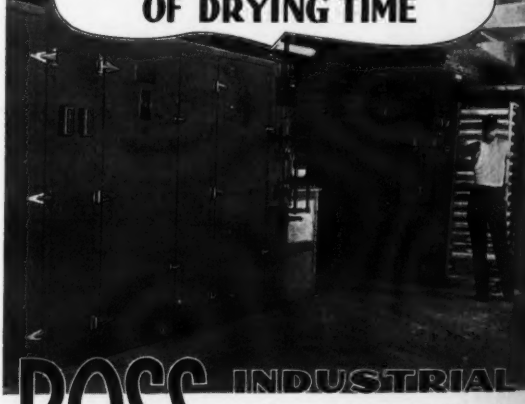
See how this valve functions, what it does, why Milton Roy Pumps may be the answer to your problems. Write for catalog.

*We can still deliver most standard units promptly.
If we can help your war production 'phone or wire.*

MILTON Roy PUMPS
1310 E. MERMAID AVE., CHESTNUT HILL, PHILA., PA.

When inquiring specify CEP4991 — see information request blank, pgs. 2-3

SAVING HALF AND MORE OF DRYING TIME



ROSS INDUSTRIAL

AIR CONDITIONING and DRYING

A single Ross Oven doing the work that ordinarily requires two or more old style ovens—and maintaining exact final moisture content of product. Investigate the possibilities for your product. Write for our Bulletins No. 130 and No. 210. No obligation.

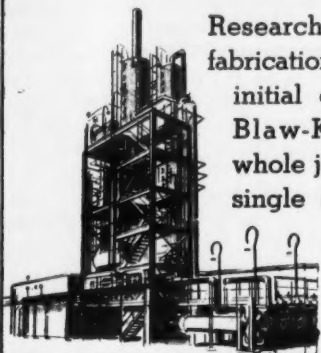
INDUSTRIAL OVENS AND DRYERS

J. O. ROSS ENGINEERING CORPORATION
350 MADISON AVE., NEW YORK, N. Y. DETROIT, MICH.
CHICAGO, ILL. ROSS ENGINEERING OF CANADA, LTD. Dominion Square Building Montreal

When inquiring specify CEP 4992 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

5 STEPS UNDER 1 RESPONSIBILITY



Research, engineering, fabrication, construction, initial operation. Let Blaw-Knox do the whole job—give you a single guarantee and single responsibility.

Complete plants or equipment for the following processes . . .

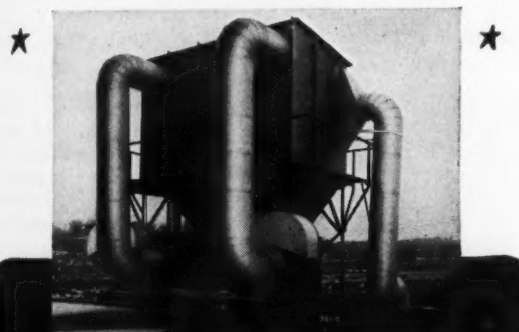
Distillation	Kilning and	Organic Synthesis
Gas Absorption	Calcining	Emulsification
Solvent Extraction	Polymerizing	High Pressure
Solvent Recovery	Evaporation	Processing
Heat Transfer	Crystallization	Impregnating
Furnacing	Drying	Gas Cleaning
Cracking	Mixing and Stirring	and others

BLAW-KNOX DIVISION OF BLAW-KNOX CO.

FARMERS BANK BLDG., PITTSBURGH, PA.

Offices in Principal Cities

When inquiring specify CEP4993 — see information request blank, pgs. 2-3



SLY DUST COLLECTOR
FILTERS ALL DUST

OUT OF 16,000 CU. FT. OF AIR PER MINUTE

★ This SLY Dust Filter, connected with the sand blast room, grinders and tumbling mills in a large midwest foundry, extracts all the dust so that the air discharged by the fans is absolutely clean. ★ Among the outstanding features responsible for SLY popularity is the larger filter cloth area which results in greater filtering capacity per unit of space. Another is the automatic control, minimizing or removing entirely the human factor. ★ With SLY Dust Filters you can protect your men and machines from dust; in some processes save valuable materials by complete collection. Yet, with all their advantages, SLY Dust Filters are not expensive. Over 5,000 successful installations. ★ When writing please give full particulars so that we may explain just what can be accomplished.

SLY THE W. W. SLY MFG. CO.
4754 TRAIN AVE., CLEVELAND, O.
INDUSTRIAL DUST CONTROL

When inquiring specify CEP4994 — see information request blank, pgs. 2-3

NEW LITERATURE

Planetary Mixers With Interchangeable Agitators, Portable Bowls, Automatically Emptied

Two-color, eight-page booklet, 8½" by 11" fully describes and illustrates this large and diversified line of mixers and many attachments and accessories for efficient handling of highly specialized requirements. Complete specifications, together with illustrations, present practical information regarding the mixing units, capacities of bowls that may be used with each, automatic bowl unloading device, speed control and special power drive. Also described is planetary mixing principle which, it is said, overcomes stratification. Booklet is available on request.

AMERICAN MACHINE & FOUNDRY CO., Dept. CEP, 511 Fifth Ave., New York, N. Y.

When inquiring specify CEP4995 — see information request blank, pgs. 2-3

Sixty Models in Line of Electric Industrial Trucks and Tractors

Large size catalog of twenty eight pages illustrates and describes in detail each number of a complete line of industrial trucks and tractors. The selection includes general utility trucks, low platform load carriers, drop frame, power lift and tiering trucks. Also given deserved attention are midjet, single and twin front wheel, single and double motor 4 wheel drive tractors. Sixteen types including 60 models comprise the standard line described. Specification and performance tables together with schematic drawing provide a wealth of mechanical data. Catalog available upon request.

CRESCENT TRUCK CO., Dept. CEP, Lebanon, Pa.

When inquiring specify CEP4996 — see information request blank, pgs. 2-3

Sand, Grit and Shot Blasting

Blast cleaning equipment and installations are the subjects of two-color, eight-page-and-cover booklet devoted to large photographic illustrations and detailed discussion of blast cleaning methods. Specifications and operating principles of tank machines are discussed. Typical blast cleaning rooms are pictured and described including those equipped with turntable, monorail, industrial truck and overhead dust arrestors. Ventilation, lighting and abrasive reclamation as well as operator's protective equipment are dealt with at length. Bulletin R 41 available on request.

PARSONS ENGINEERING CORP., Dept. CEP, 3589 East 82nd St., Cleveland, Ohio.

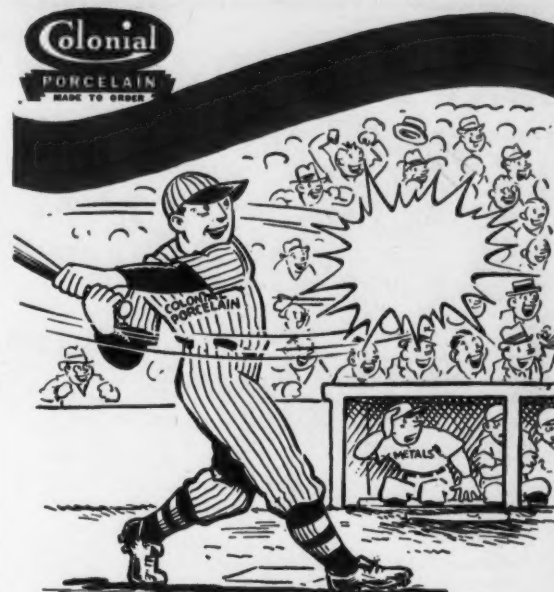
When inquiring specify CEP4997 — see information request blank, pgs. 2-3

Metal Tags & Plates Give Lasting Service

Twenty-four page and cover, large size catalog fully describes and illustrates some 200 styles, sizes and types of metal plates, tags, tokens, badges and signs. The countless uses for which these are recommended are in part; identification, tool, specifications and number tags and plates, as well as safety, directional and departmental signs. Also shown is a selection of stamping equipment from hand stamping kits and name plate presses to numbering heads and special marking devices. Supplement E to Catalog No. 146 is available upon request.

JAS. H. MATTHEWS & CO., Dept. CEP, 3942 Forbes St., Pittsburgh, Pa.

When inquiring specify CEP4998 — see information request blank, pgs. 2-3



Colonial Porcelain may make an effective substitute for your metal parts. It is already pinch-hitting for a number of metals during the emergency. Why not write for our catalog — or better yet send a sample or a blue print of the parts you need.

THE COLONIAL INSULATOR CO.

967 Grant St., Akron, Ohio
Chicago Office: 1706 Fullerton Ave.

When inquiring specify CEP4999 — see information request blank, pgs. 2-3

**YOU'LL ESTABLISH
HIGHER
EFFICIENCIES**



with
**"HAMMOND"
Screw-Lift**

**Designed Right to Work Right
Lifts up to 70 Feet and Over**

- Precision Built . . . no whip . . . perfect alignment by use of patented oil-less stabilizer bearings at conveyor junctions.
- Thrust and Radial loads carried by Timken Roller Bearings.
- Drive Units with forged steel cut-tooth gears totally enclosed . . . Timken equipped.
- Gravity or Power Feed.

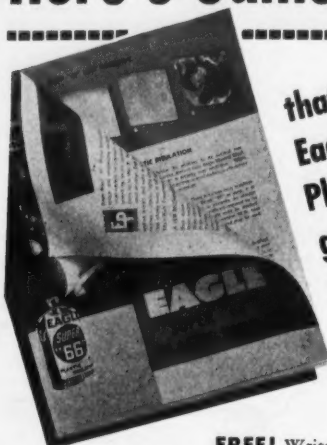
If you have a bulk material handling problem, investigate the remarkable possibilities which the "HAMMOND" Screw-Lift offers. It will handle any free-flowing materials such as Salt, Flour, Baking Powder, Cottonseed, Fuller's Earth, Soap, Soda Ash, Coal, Talc, Tobacco, Bone, Starch, Sugar and a multitude of other materials.

Ask for analysis form M-500-2

Screw Conveyor Corporation
899 HOFFMAN ST. HAMMOND, IND.
SCREW CONVEYORS HAMMOND ELEVATOR BUCKETS
TRADE MARK REG. PRODUCTS U.S. PAT. OFFICE

When inquiring specify CEP5000 — see information request blank, pgs. 2-3

Here's Camera-Proof



that
Eagle Super "66"
Plastic Insulation
gives
double protection
against rust!

FREE! Write today for new catalog sheets on Eagle Super "66" Plastic Insulation. They contain picture evidence of its sensational non-corrosive and rust-inhibitive properties. Also facts explaining why its "springy ball" structure assures high coverage (50-55 sq. ft. 1-in. thick per 100 lbs. when dry), and full efficiency for temperatures as high as 1800° F. Liberal test sample also sent on request.

THE EAGLE-PICHER LEAD COMPANY

Cincinnati, Ohio

Eagle-Picher High Temperature Insulating Materials also include Eagle Supertemp Blocks, Eagle Blankets, Eagle Loose Wool, Eagle Insulseal, Eagle Insul-stic, Eagle Finishing Cements.

When inquiring specify CEP5001 — see information request blank, pgs. 2-3

X-PANDO Pipe Joint Compound

ONE
FORMULA
FOR ALL
USES

EXPANDS AS
IT SETS—
ENDS LEAKS
PERMANENTLY

6 FOR ONE
ECONOMY—
CUTS COSTS
BY 50%

IT'S THE
EXPANSION
THAT CORRECTS
IMPERFECTIONS
IN THREADS

HOLDS
ANYTHING
CARRIED
IN METAL
PIPE

NOT AFFECTED
BY VIBRATION;
WITHSTANDS
DEFLECTION,
HIGH
TEMPERATURES

Send
for facts
about Manotox
Protective Coating.
Formula B92 a con-
densation retarding,
anti-corrosive coat-
ing for metal,
wood, concrete
and other
surfaces

X-PANDO CORPORATION

43-15—36th Street • Long Island City, N. Y. • STILwell 4-7180

Canadian Distributors: LeSalle Products Ltd. 159 Jean Talon St. W. Montreal Quebec Canada

When inquiring specify CEP5002 — see information request blank, pgs. 2-3

MATERIALS . . .

Additive Stops Corrosive Action of Lacquers on Iron, Steel Drums

Tin lining unnecessary; method provides savings even at pre-war price of tin

Uses — As an additive to clear lacquers, nitro-cellulose solutions and alcoholic shellacs to inhibit corrosion encountered when these materials are shipped in iron or steel containers. This eliminates the necessity of using tin-lined drums. Solution has interesting properties as a flocculating agent in flat lacquers.

Features — Relieves manufacturers of problem of obtaining tin-lined drums present shortage conditions. In case of breaks, it is self-mending by virtue of the manner in which it is formed.

Performance — Lacquers containing this product, known as D. P. Solution, have been shipped from Boston, through the Panama Canal, to the Pacific coast without any corrosion taking place despite sudden changes in weather and prolonged subjection to high temperatures. Shipments have also been made to China and arrived in satisfactory condition.

Description — This additive is a solution of an organo-phosphorus compound. Used in lacquers in proportions of 0.1 to 1.0 per cent it gives effective protection against corrosion of iron or steel when these metals are a factor in the handling of lacquer shipments. Because the use of this solution offers such a cost advantage over the tin-lining of drums even at pre-shortage prices, it should continue to be favored even when tin supplies are again adequate. The small percentage of solution required has a negligible effect on other properties of the lacquers. The minimum amount of active constituent should be not less than 0.75 per cent of the weight of the nitrocellulose. The action of the solution is described as reacting with iron to form an insoluble film. It is advisable where drums are used for storage to invert them for a short interval before leaving them in a given position for an extended period. This permits a coating to form over the entire interior surface of the container. The solution is not recommended for pigmented lacquers or for use in paints or synthetics which dry by oxidation.

MONSANTO CHEMICAL CO., Merrimac Div., Dept. CEP, Everett, Mass.

When inquiring specify CEP5003 — see information request blank, pgs. 2-3

Modified Phosphate of Glass Stops Scale in Small Systems

Proportions small quantities required for can, bottle washers and air conditioning units

Uses — To prevent scale in hot water heater coils, mechanical bottle and can washing equipment. Also used on such air conditioning units as evaporate condensers, air washers and humidifying systems.

Features — This form of phosphate glass makes it possible to give scale and corrosion prevention treatment to small systems. Previously it had been difficult to proportion the very small amount required in such instances. No adverse physiological effects.

Description — This special form of phosphate of glass, identified as "Micromet" was developed to extend to numerous limited applications this form of treatment, used successfully in municipal water systems and other large in-

stallations. "Micromet" is a slowly soluble phosphate glass made from food grade phosphoric acid. It is carefully ground and sized to eliminate fine particles. One pound of "Micromet," occupies a volume of 22 cubic in. Dissolves in cold water at rate of 25% per month regardless of the amount of water flowing through it. Usual feed necessary to correct scale is 5 ppm. or one pound to each 24,000 gal. of water. Initial charge will be four times this or one pound to each 6,000 gals. of water. "Micromet" is fed into the feed-water line by means of a simple pot-type feeder that can be made up locally to meet the requirements of the particular installation. Packed in 1, 1½ and five pound units.

CALGON, INC., Dept., CEP, 323 Fourth Ave., Pittsburgh, Pa.

When inquiring specify CEP5004 — see information request blank, pgs. 2-3

Primer for Galvanized and Similar Surfaces

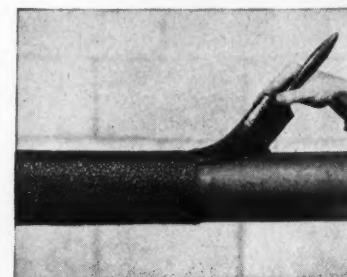
Folder describes use of preparation to prepare various zinc surfaces to assure adhesion of paint. Properties of the product are described and complete directions for its use on galvanized iron, galvanneal surfaces, die castings and electro-galvanize surfaces are given. Folder 49 available on request.

NIELSON CHEMICAL CO., Dept. CEP, 6564 Benson St., Detroit, Mich.

When inquiring specify CEP5005 — see information request blank, pgs. 2-3

Plastic Cork Coating Stops Condensation Drip

Applied with brush, trowel or spray to pipes, tanks or any clean painted or unpainted surface



PLASTIC CORK COATING
stops condensation . . . only one
coat required

Uses — To stop dripping wherever condensation or sweating is encountered. Pipes, tanks, painted or unpainted walls, ceilings, corners and all clean surfaces such as concrete, wood, brick, plaster, tile, galvanized or composition materials are effectively treated.

Features — Adaptability to various methods of application: brush, trowel or spray. Self bonding. No primer needed except for severe rust conditions. Non-inflammable while wet and will not propagate fire when dry. Odorless, vermin proof, protects metal against rust, requires no maintenance and can be painted any color. It is said that one coat ¼ in. thick is sufficient to stop dripping.

Description — Ordinary paint brush is recommended for applying this material to pipes and small areas. Where it is desirable to paint the surface the manufacturer's non-bleeding sealer (white) should be used first, or any good non-bleeding paint. One gallon of this plastic cork coating covers about 30 ft. of 1" O. D. pipe. Furnished in 1 and five gallon containers and 55 gallon drums.

I. W. MORTELL CO., Dept. CEP, Kankakee, Ill.

When inquiring specify CEP5006 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

MATERIALS

High Impact Phenolic Type Plastic

Provides heavy duty molding compound as replacement for vital materials

Uses — Heavy duty molding compound meeting the special impact specifications that are required for such applications as small pulley wheels, casters and rollers. Designed to replace materials vital in war production.

Features — Has a macerated fabric filler and consequently is not readily perforated.

Description — High impact plastic of the phenolic type has impact strength of 2.0 and a specific gravity of 1.44. It is said to have a very good cure for material of this type. Colors, black or brown. Identified as "Durez" 11934.

DUREZ PLASTICS & CHEMICALS, INC., Dept. CEP, North Tonawanda, N. Y.

When inquiring specify CEP5007 — see information request blank, pgs. 2-3

American Colloidal Graphite, Unaffected by Acid Fumes and Vapors

The recent availability of natural colloidal graphite through American research is the subject of a new bulletin which emphasizes the importance of this development to the war production program. The various applications are described and the suspensions in which the graphite is supplied are listed. Of particular interest is the mention of successful graphiting of light fuels; also the request that engineers contribute "case histories" of experiments or uses in determining the most desirable techniques of application. The product is a replacement for the standard natural graphite suspended in oil which was imported from Germany. The bulletin is available on request.

NATIONAL GRAPHITE CO., Dept. CEP, 17 John St., New York, N. Y.

When inquiring specify CEP5008 — see information request blank, pgs. 2-3

Extender Replaces 5 to 20% of Rubber in all Types of Compounds

Use in existing formulations does not change proportions of sulphur, accelerator and zinc oxide

Uses — Conservation of rubber through replacement of rubber hydrocarbon in all types of compounds without sacrifice of physical properties.

Features — Enters into vulcanization reaction and requires the same amount of sulphur, accelerator and zinc oxide as does the rubber hydrocarbon, eliminating any necessity for change in the quantity of these ingredients as used in existing formulations.

Description — This product, called Extender C, is said by the suppliers to replace from 5% to 20% of rubber hydrocarbon. It is a sponge like material, prepared by a patented process from carefully selected vegetable oils. It is soluble in water and common organic solvents and can be used in compounds requiring chemical resistance. In addition to serving as an extender it also acts as a plasticizer, permitting easier processing of uncured stock on mill, tuber or calendar. It serves also as a dispersing agent of carbon black in heavily loaded compounds. Detailed information is available upon request.

WISHNICK TUMPEER, INC., Dept., CEP, 295 Madison Ave., New York, N. Y.

When inquiring specify CEP5009 — see information request blank, pgs. 2-3



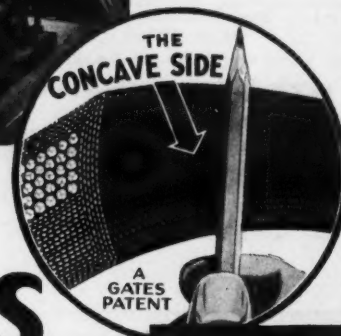
This Simple Idea . . . is **SAVING BELTS** for Industry . . . and Rubber for the Nation

To see for yourself the belt-saving importance of the CONCAVE SIDE, just pick up any V-belt and bend it as it bends when it goes around a pulley.

As the belt bends, grip its sidewalls firmly with your fingers as in the photograph above. You will feel the sides of the belt *change shape*. If the sides were straight before bending, they will *bulge outward* as the belt bends. (See Figure 1 on the right).

Now look at Figure 2. Here you see how bending changes the shape of a belt that is built with the patented Concave Side. The side becomes perfectly *straight*. This belt, when bent, precisely fits its sheave groove. Here are the savings:—(1) There is no side-bulge. This means *uniform wear—longer life—a saving in belts for you, a saving in rubber for the Nation.* (2) The full side-width of the belt *uniformly grips the sheave groove wall—carries heavier loads without slippage—another saving of belts and a saving in power, too!*

Only belts built by Gates are built with the Concave Side, a Gates patent.



What Happens
When a
V-Belt Bends



FIG. 1

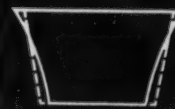


FIG. 2

THE GATES RUBBER COMPANY

Engineering Offices and Stocks in All Large Industrial Centers

GATES VULCO ROPE DRIVES

Chicago, Ill.
549 West Washington

New York City
215-219 Fourth Avenue

Birmingham, Ala.
405 Liberty National Life Bldg.

Los Angeles, Cal.
2240 East Washington Blvd.

Denver, Colo.
999 South Broadway

Dallas, Tex.
2213 Griffin Street

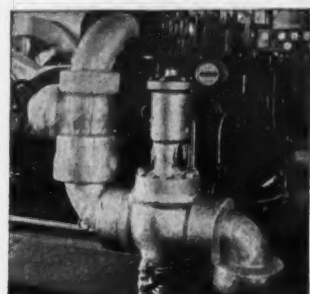
Portland, Ore.
333 N. W. 5th Avenue

San Francisco, Cal.
2700 16th Street

—When inquiring specify CEP5010 . . . see information request blank, pgs. 2-3—

WYO-LITE PLASTIC INSULATION

is 100% PURE



WYO-LITE Plastic Insulation is used for all types of furnaces, boilers, ovens, dryers, fittings, hot water tanks, etc., etc. It is easy to apply and has no glassy fibers that may injure hands.

**1 TON
covers
1500
SQ. FT.**

The insulating aggregate in WYO-LITE is expanded mica made from vermiculate ore. The ore is scientifically expanded, from 15 to 20 times in volume, in a patented furnace which accounts for the low weight and larger coverage — one ton covers 1,500 sq. ft., 1" thick. In our process of expanding the vermiculate ore, a fan LIFTS the

COMPLETELY expanded particles and all unexpanded ore and foreign matter is discharged in a separate container. Because of this process, WYO-LITE Plastic Insulation is 100% PURE. It contains no foreign matter and nothing to cause or accelerate corrosion.

Write for Details and Prices

WYO-LITE INSULATING PRODUCTS

4613 East 71st St.,

Cleveland, Ohio

1 Ton of Wyo-Lite Covers 1500 SQ. FT.

When inquiring specify CEP5011 — see information request blank, pgs. 2-3

FLOORS REPAIRED QUICKLY

with

"SPARK-PROOF"

**SPEED
PATCH**

READY MIXED
IMMEDIATE USE
EASY TO APPLY
NO CURING
NO DELAY
PERMANENT
ECONOMICAL



★ Don't let rough, cratered floors slow up production in YOUR plant. Speed up traffic . . . avoid accidents . . . keep 'em rolling! Repair with SPEED-PATCH, INSTANTLY, without traffic delays, without outside help or expensive materials. Simply brush on primer, dump in SPEED-PATCH, tamp solid and let 'em roll! Makes a hard, smooth, feather-edge repair that will take ANY load. Every plant should keep SPEED-PATCH on hand for emergency repairs and regular use. Order today!

Write for details on complete line Industrial Maintenance Materials

ROCK-TRED

CORPORATION
605 W. WASHINGTON STREET
MONROE 3560 — CHICAGO, ILLINOIS

When inquiring specify CEP5012 — see information request blank, pgs. 2-3

MATERIALS . . .

Lanolin Substitute Has Many Uses

Light colored stiff paste made from domestic materials; insoluble in water; partially soluble in alcohol

Uses — Suggested as a protective coating for metals and as a grease and lubricant in most cases where lanolin is being used for industrial purposes. Because of its water insolubility, it may be used as a seal in lines carrying water and water soluble liquids. Also of interest for the dressing, finishing and softening of leather and similar products.

Features — Made from domestic raw materials and is freely available for civilian use. Closely resembles lanolin, being a light colored stiff paste with a melting point of 55° C. to 60° C. Has a surface tack similar to that of lanolin. Is insoluble in glycerin and most water soluble liquids as well as water. Partially soluble in alcohol and vegetable oils. Soluble in toluol and mineral spirits in the cold, and soluble in mineral oil when heated. Mineral oil solutions form soft gels on cooling. Samples and further description available upon request. Marketed under the trade name "Sublan."

GLYCO PRODUCTS CO., Dept. CEP, 230 King St., Brooklyn, N. Y.

When inquiring specify CEP5013 — see information request blank, pgs. 2-3

Low Temperature Insulation With Mineral Wool

Eight-page, 8½ x 11" book covers material specifications, specifications for the surface preparation of areas to be insulated, and individual specifications for the application of mineral wool insulation to walls, floors, ceilings, piping, fittings, etc. Twelve engineering drawings in perspective illustrate approved methods of applying mineral wool insulations, providing the necessary vapor barrier, supporting and finishing off the insulation in various applications. Copies of "Specification No. 1 — Mineral Wool in Low Temperature Installations" are available upon request.

INDUSTRIAL MINERAL WOOL INSTITUTE, Dept. CEP, 441 Lexington, New York, N. Y.

When inquiring specify CEP5014 — see information request blank, pgs. 2-3

New All Purpose Caulking Compound in Ready-to-Use Form

Designed for numerous requirements of electricians, plumbers, steamfitters, mechanics and maintenance men

Uses — Originally developed to seal openings of ducts carrying an electric conductor; now used effectively as a general sealing and caulking compound.

Features — Used just as it comes from the package. Won't hurt hands.

Description — A non-hardening, adhesive plastic compound made with an asbestos base packed ready for use. No heating or softening required. It is insoluble in water, unaffected by water and condensates. Among the various industrial uses for which it is recommended are sealing potheads, bushings, terminal boxes, battery terminals and caulking steel window frames. Known as "Duxseal." Compound weighs approximately 100 lbs. per cu. ft. Available in 1 lb., 5 lb. pugs.

JOHNS-MANVILLE, Dept. CEP, 22 East 40th St., New York, N. Y.

When inquiring specify CEP5015 — see information request blank, pgs. 2-3

Floor Patch Takes Traffic At Once

No 12 to 20 hour delay with new fast-acting material; solves floor repair problem in full-time plants



INSTANT FLOOR PATCH . . .
ready for trucks immediately

Uses — To patch or overlay a rutted or damaged floor while it is in service.

Features — Trucks may be taken over the new surface as soon as it is laid. No 12 to 30 hour delay is necessary. Does not interrupt work in plants maintaining full time production.

Adheres to old concrete or wood, and bonds to a feather edge. Makes it easier to start trucks when they've been standing. According to the manufacturer, it will improve in smoothness and compact under the wheels of constant traffic. This ready-to-use material is called "Instant Use Resurfacer."

FLEXROCK CO., Dept. CEP, 23rd & Manning, Philadelphia, Pa.

When inquiring specify CEP5016 — see information request blank, pgs. 2-3

Zircon, Rutile, Ilmenite Processed By New Methods

New methods of separating, refining, beneficiating achieve new degrees of purity

Uses — For chemical, paint, paper, ceramic, refractory and welding industries. Zircon, especially in the ceramic field and rutile as a coating for welding rods.

Features — These minerals are said to be of exceptional purity with practically no contamination due to methods of separating, refining and beneficiating the raw concentrates.

Description — Organization specializes in the separation and concentration of mineral ores. The materials referred to specifically here are typical of ore treatment operations it carries on. Grinding methods developed are said to have practically limited the possibility of contamination and to produce a product almost 100% pure. Some of the various ores included in these activities include tungsten, monazite and brookite in addition to those mentioned. Rutile and Zircon supplied in grain or ground to specifications. Ilmenite in grain form only.

OREFRACTION, INC., Dept., CEP, 7517 Meade St., Pittsburgh, Pa.

When inquiring specify CEP5017 — see information request blank, pgs. 2-3

Protective Coatings

Forty-eight-page, 6 x 9-inch booklet, contains detailed and essential information about a wide variety of protective coatings. Each type of coating has data on how the material is applied, what it does, the coverage, etc. Prices are shown in special section. Booklet is available on request.

PROTECTIVE COATINGS, INC., Dept. CEP, 10391 Northlawn, Detroit, Mich.

When inquiring specify CEP5018 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW



**FINGERPRINTS
FOIL ORDINARY
RUST-PROOFING!**



PLY-RUSTEX

PLY-RUSTEX provides the "missing link" in rust-proofing high-precision parts. When you use PLY-RUSTEX CREAM—applied to the hands—there's no chance for fingerprints to form corrosion areas. The combination of PLY-RUSTEX LIQUID and CREAM affords positive protection before, during and after machining or processing operations. In addition, it protects workers' hands against industrial dermatitis. NO OTHER SIMILAR PRODUCT OFFERS ALL THESE EXCLUSIVE ADVANTAGES!

• Write TODAY for complete details of this new rust-proofing material and technique.



The MILBURN Co.
DETROIT MICHIGAN

When inquiring specify CEP5019 — see information request blank, pgs. 2-3

FLOOR MAINTENANCE:

*Repair floors with
Flash-Stone and
USE immediately!*

Do not confuse Flash-Stone with any other floor repair material. It's different — it's new — it's guaranteed to satisfy you or your money back. All you do is place material — pock or roll — then use the floor.

Easy to install — Lasts longer in hard service. Write today for all the details.

Flash-Stone
COMPANY INC.

1935 N. 12th Street, Phila., Pa.

THE **NEW**
PLASTIC
FLOOR MAINTENANCE
MATERIAL



COMES
READY-MIXED

Packed in neat, non-returnable plywood drum — primer enclosed — ready to use — no mixing — no mess.

When inquiring specify CEP5020 — see information request blank, pgs. 2-3

JULY-AUGUST, 1942

MATERIALS

Solvent Cleans Metal In Cold Tank

Dirt digestive concentrate takes the cling out of hard mineral and grease accretions; emulsion rinses off

Uses — For cleaning insoluble dirt from metal parts in open tanks.

Features — Made in the form of a concentrate, so that it may be diluted with a grease solvent before use to charge large vats or open cleaning tanks. Cleans by cold immersion process. Makes possible grease cleaning operations on a large scale with little investment in equipment. Simple rectangular tanks of 300 gallon capacity will suffice for the process.

Performance — According to the manufacturer, this solvent not only takes the cling out of hard mineral dirt and grease accretions, but emulsifies them as well, so that they may be instantly and completely washed away by sluicing with a water hose. The removed oil and dirt disappears in the form of a milky oil-in-water emulsion which does not clog sewer drains or present a fire hazard, the manufacturer also declares. Preliminary field tests show that Trichlorethylene vapor degreasing tanks may be converted to the new solvent digestive and emulsifying method by available shop labor.

Description — This dirt digestive concentrate is marketed under the trade name "Gunk X-11." Engineering data sheets are available on request.

CURRAN CORP., Dept. CEP, Malden, Mass.

When inquiring specify CEP5021 — see information request blank, pgs. 2-3

Enamel Holds To Wet Surfaces

May be painted on wet walls and equipment without interruption; will not taint food; dries fast

Uses — For industries that are known to have surface maintenance problems due to exposure to water, live steam, alkali, refrigerant and similar materials.

Features — According to the manufacturer, this enamel may be used on wood, concrete or steel, where it will give the same satisfactory service as any high grade enamel, plus the unusual advantage of adhering to wet surfaces. This advantage eliminates closing down plant operations or taking equipment out of active use in order to dehumidify walls, machinery and equipment preparatory to painting. Production is not interrupted, and no time is lost. The enamel is non-yellowing, it resists corrosive gases and alkaline conditions, and it holds a high gloss after repeated washings with soap and water. Dries dust-free in one hour, to the touch in four to six hours, and to a reasonably hard film overnight. It dries in forty-eight hours at a low temperature. Since it contains no ingredients with an offensive odor, and will not taint food, it is especially useful where clean and sanitary conditions are desired, declares the maker. It flows easily, and dries to a permanent gloss without danger of cracking, peeling or checking. It is claimed to have great hiding power, covering capacity and durability, plus economy in use. This wet surface paint is called Dampdex Enamel and is offered in white and colors.

STEELCOTE MFG. CO., Dept. CEP, St. Louis, Mo.

When inquiring specify CEP5022 — see information request blank, pgs. 2-3

Why wait for that last straw?



INCREASE your production — then double it — and redouble it. That's the cry these days. And still they tell us we "ain't seen nothin' yet." Manufacturing facilities that were adequate yesterday are taxed to the limit today. And it's none too soon to be anticipating the demands of tomorrow.

This is particularly true of water conditioning equipment and right now is the time to take stock of the situation — to make a survey of demand and capacity from the standpoint of quality as well as quantity. Maybe there's still a safe margin — but you'll be wise to make certain. And if you're confronted with a problem, play doubly safe and consult Graver at once.

For more than 30 years Graver has specialized in the design and manufacture of water conditioning equipment of all types. Graver engineers have tackled the most difficult water conditioning problems — and solved them. They'll gladly make an analysis of water samples and submit unbiased recommendations without cost or obligation.

Write Graver — today.



GRAVER

GRAVER TANK & MFG. CO. INC.

4809-12 TOD AVE

EAST CHICAGO, IND.

NEW YORK

CATASAUQUA, PA.

CHICAGO

TULSA

42-24-W

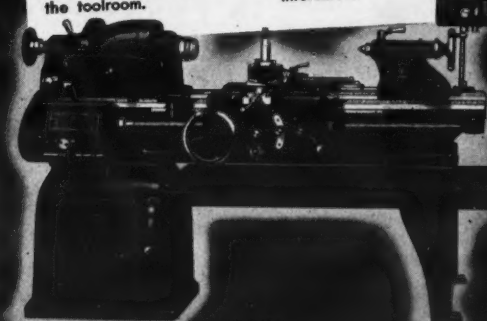
When inquiring specify CEP5023 — see information request blank, pgs. 2-3

You Can Depend On SOUTH BEND LATHES

Modern in design — built with extreme precision, South Bend Lathes will give you the same dependable, trouble-free service they are giving in thousands of war production plants. They have the speed, power and rigidity for the efficient production of duplicate parts. Their versatility is a real time-saving factor in the toolroom.

South Bend Toolroom and Quick Change Gear Lathes are made in 5 sizes: 9", 10", 13", 14½", and 16" swings, with bed lengths from 3' to 12'. A number of practical attachments are available. Turret Lathes are made in 3 sizes.

Write for catalog, specifying type and size of lathe in which you are interested.



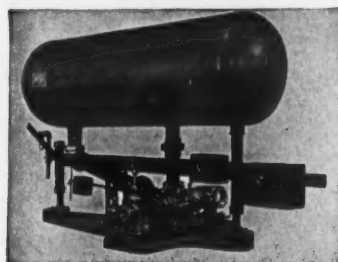
SOUTH BEND LATHE WORKS

Dept. 285, South Bend, Indiana

Lathe Builders for 35 Years

When inquiring specify CEP5024 — see information request blank, pgs. 2-3

You can SAVE hundreds of dollars



**a year
that you now
LOSE
in fuel and
water costs**

**ACKER Deaerating and Equalizing Systems
save your boilers, pipe, valve, fittings**

Return your condensate promptly, while it's hot, to reduce fuel consumption. You can depend on ACKER Boiler Return Equipment to save fuel and water, increase your production. Unusual new features assure positive operation, long life.

A condensed milk plant reports "Saved 1950 lbs. (25%) of coal the first day." A dry milk plant — "Saving in fuel has not been less than 13% at any time."

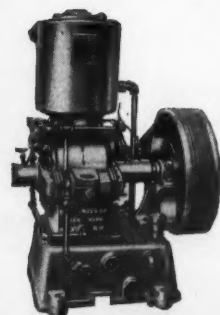
All ACKER installations carefully engineered. Equipment obtainable on priority by war and other essential industries. Economy is both wise and patriotic these days — write for data now!

W. M. ACKER ORGANIZATION, INC.
3167 Fulton Road Cleveland, Ohio

When inquiring specify CEP5025 — see information request blank, pgs. 2-3

**Get Highest Vacuum
Top Volumetric Efficiency
Fastest Pump Down**

**AND SAVE
ON COST—
TIME—POWER
IN PROCESSING**



To get the low-down on how the many design advantages of Beach-Russ Type RP High Vacuum Pumps are reflected in faster, more efficient vacuum processing over longer, less costly service period, get a copy of Bulletin 75. Write to Beach-Russ Company, 40 Church St., New York, N. Y.

**BEACH-RUSS Rotary Piston
HIGH VACUUM PUMPS**

When inquiring specify CEP5026 — see information request blank, pgs. 2-3

MATERIALS

**New Soap Antioxidant Replaces
Those Made Unavailable by War**

*Made from plentiful materials unlikely to be needed
in war effort; does not effect color or odor; used
in extremely small quantities*

Uses—To prevent oxidation and resultant rancidity and discoloration in soap. Developed to replace antioxidants now unavailable because of material shortages.

Features—Source is from raw materials not likely to be required in the war effort.

Description—Product is an organic amine,—a light gray to white powder that does not effect color, odor or other characteristics. It is used in extremely small quantities varying from 0.04 per cent to 0.01 per cent of the weight of the soap, the recommended amount varying inversely with the titer of the soap. It is basic in character and reacts with oleic, stearic and other fatty acids and therefore is added after these acids have been saponified. The addition may be made at any of several points in the soap making process; in the kettle after liquors are drawn; in plodding; or on amalgamation or roller mills. The product may be introduced as an alcoholic solution, as a water slurry or with other solvents. Thorough application tests have been completed on this antioxidant known as "SA 326."

MONSANTO CHEMICAL CO., Dept. CEP, St. Louis, Mo.

When inquiring specify CEP5027 — see information request blank, pgs. 2-3

**Quick-Hardening Cement for Patching
Concrete Floors**

Descriptive four-page folder tells how to patch concrete floors quickly with this cement product. Photos and text give admonitions and suggest use of the material offered. Features are described fully. Folder available upon request.

SMOOTH-ON MFG. CO., Dept. 311, 570 Communipaw Ave., Jersey City, N.J.

When inquiring specify CEP25028 — see information request blank, pgs. 2-3

**Emulsion Type Cleaner For Spray
Washing Machines**

*Protects against rust; no fumes, non-irritating to
skin; dilutes clear with kerosene*

Uses — For water emulsion cleaning of any type of work that can be handled in a pressure spray washing machine and on which a physically clean surface is required. Gives rust protection for shop storage of cleaned work.

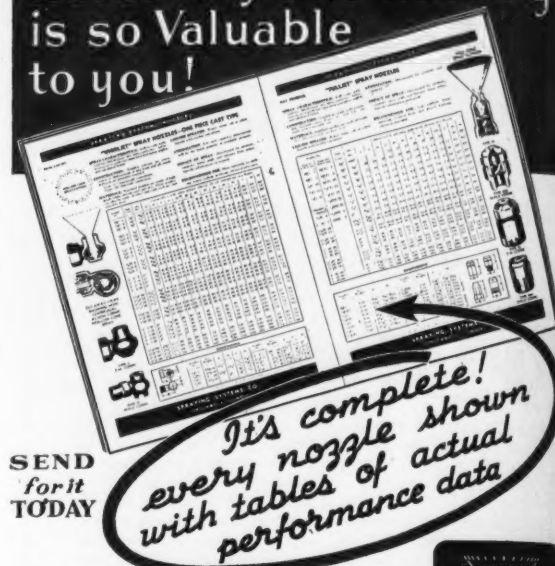
Features — Can be handled safely. Will not affect the skin. Non toxic, no fumes. Won't attack or tarnish metals.

Description — Thin bodied, low viscosity, liquid solvent emulsion type cleaner. Temperature should be maintained at about 200 degrees F., or as hot as pump will handle. Concentration for pressure spray washing machine should be from 25 to 75 parts of water to one part by volume of the cleaner. For drip, slush or spray solubilizing cleaner would be used straight at room temperatures or diluted with kerosene up to two parts by volume of kerosene to one part of the cleaner.

COWLES DETERGENT CO., Dept., CEP, 7018 Euclid Ave., Cleveland, Ohio.

When inquiring specify CEP5029 — see information request blank, pgs. 2-3

**Here's why this Catalog
is so Valuable
to you!**



**SEND
for it
TODAY**

**Manufacturers of Spray Nozzles
for Every Industry**

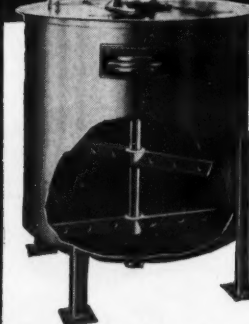
SPRAYING SYSTEMS CO.

4037 W. LAKE ST.

CHICAGO

When inquiring specify CEP5030 — see information request blank, pgs. 2-3

**INTERNATIONAL
PERMANENT &
PORTABLE
MIXERS**



*a size to fit
your job
exactly—
All
Types 50 to 50000
GALLONS*

Complete with Mixing unit and Tank, Stationary or Portable; Tanks of Steel, Monel, Stainless, etc.

TANKS, DIGESTERS
AUTOCLAVES, TREATERS
BLENDERS AND MIXERS
Agitators with Speeds
from 5 R.P.M. Up
PROPELLERS, SHAFTS, ETC. MADE
OF BRONZE, MONEL, STAINLESS, RUBBER
COVERED—SEND FOR CATALOG NO 95

INTERNATIONAL ENGINEERING, INC.
DAYTON, OHIO

When inquiring specify CEP5031 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

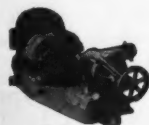
FOR DEFENSE PRODUCTION YOU NEED PUMPS YOU CAN TRUST



Hand Pumps
54 Models



Power Pumps
5 to 700 GPM



Sanitary Pumps
20, 50, 100 GPM

★★★ BLACKMER • ROTARY • PUMPS

THE PUMP THAT IS SELF-ADJUSTING FOR WEAR
FAMOUS BUCKET DESIGN

Pumps that insure against costly shut-downs. Blackmer "Buckets" (swinging vanes) are easily replaced in 20 minutes, restoring the pump to original efficiency.

Pumps that last, 20 years' continuous service is not uncommon with Blackmer Rotaries.

Pumps that cost less to run. Blackmer features have lowered pumping costs in hundreds of plants. We build pumps in all standard drives. With removable liners, unlined steam-jacketed.

Bulletin No. 301 — "Facts About Rotary Pumps" will be sent free.

Write to Blackmer Pump Company, 1847 Century Avenue, S. W., Grand Rapids, Michigan.

BLACKMER Rotary PUMPS "BUCKET DESIGN"—SELF-ADJUSTING FOR WEAR

When inquiring specify CEP5032 — see information request blank, pgs. 2-3

STAINLESS STEEL MONEL...NICKEL

Valves...Fittings...Castings

Resistant to CORROSION, HEAT AND ABRASION

Cooper offers you a complete foundry and machine shop service. This modern plant can fulfill your most difficult casting requirements . . . in sizes from one ounce to two tons . . . in stainless steel, monel, nickel and many special alloys . . . rough, semi-finished or fully machined. If you desire we will finish all surfaces, interior and exterior, bright and clean by our LUSTRACAST process. A complete line of stainless steel valves and fittings are carried in stock.

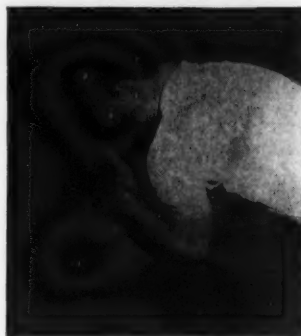
THE Cooper ALLOY FOUNDRY CO.
150 BLOY STREET • HILLSIDE, NEW JERSEY

When inquiring specify CEP5033 — see information request blank, pgs. 2-3

MATERIALS

Stops Leaks In Concrete

Sealer liquid mixed with Portland cement quickly stops leaks even against pressure



LEAK COMPOUND made in minute with sealer and cement. Where dampness or seepage exist plaster coat of same material is applied to make surface bone dry. Product is known as "Flexite."

FLEXROCK CO., Dept. CEP, Manning Sts., Philadelphia, Pa.

When inquiring specify CEP5034 — see information request blank, pgs. 2-3

Catalog of Paints, Sundries & Builders' Supplies

Large 24-page catalog and eight-page price list contains everything in this line, from Aggregates through Waterproofing. A foreword says "This catalog contains complete information on those 'hard to get' products that you have difficulty in locating. . . ." Large selections of plasters and fillers, cleaners, flooring supplies, removers, water paints and marking materials are offered. Among the products presented are diatomaceous earth, rottenstone, inerts for paint grinders and air conditioning powder. Color samples for dry colors are given in two full pages, and diagrams show are available upon request.

TAMMS SILICA CO., Dept. CEP, 228 N. La Salle, Chicago, Ill.

When inquiring specify CEP5035 — see information request blank, pgs. 2-3

Washable Protective Covering for Flat Wall Paint

Six-page folder, "As If By Magic," describes a washable protective covering for flat wall paint to be applied over a newly painted or cleaned wall to provide a clear, transparent, flat protective film that prevents dust and grime from penetrating pores of the paint. Booklet is available on request.

BERGONIZE CO., Dept. CEP, Merchandise Mart, Chicago, Ill.

When inquiring specify CEP5036 — see information request blank, pgs. 2-3

Synthetic Rubber From the Oil Fields

Profusely illustrated 12-page bulletin tells the story of a series of synthetic rubbers made from liquefied petroleum gases. Covered are the facts about what the material is, how much of it is being made, how it is handled, what its important features are, how it compares with natural

HYCAR CHEMICAL CO., Dept. CEP, Akron, Ohio

When inquiring specify CEP5037 — see information request blank, pgs. 2-3

Stop WASTING TIME

IN THE process of your products, there is handling to be done. Here's where you can save time and money. Call in an American MonoRail Engineer. He can show you definite savings in any of your materials handling operations. That's his business — American MonoRail equipment is available for manual, electric or automatic operation. No job too small — none too large, and definitely suited to your individual need. No interruption to your production during installation. Stop wasting time — call in an American MonoRail Engineer today.

THE AMERICAN MONORAIL CO.
13109 Athens Ave. Cleveland, Ohio

WRITE FOR Blue Book
Illustrating hundreds of
MonoRail installations



Automatic dumping and return to loading point.



Low cost transfer from building to building.

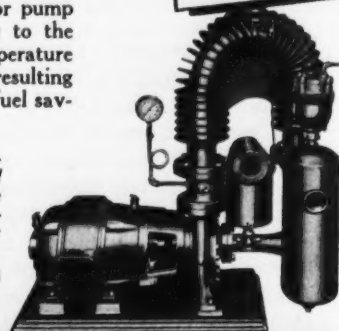
When inquiring specify CEP5038 — see information request blank, pgs. 2-3

better production... through FASTER HEAT

Speed up your boiling time in process through prompt and thorough removal of condensate and automatic and continuous separation and removal of entrapped air by the positive Cochrane-Becker closed circuit system... ejector pump returns condensate to the boiler at high temperature and high pressure resulting in faster heat and fuel savings up to 28%!

For higher quality, increased production and lower cost—the C-B system sets new standards of drainage efficiency. Write for Publication No. 3025.

COCHRANE CORPORATION
3147 North 17th Street
Philadelphia, Pa.



Plant operators
everywhere have
found this system
provides:

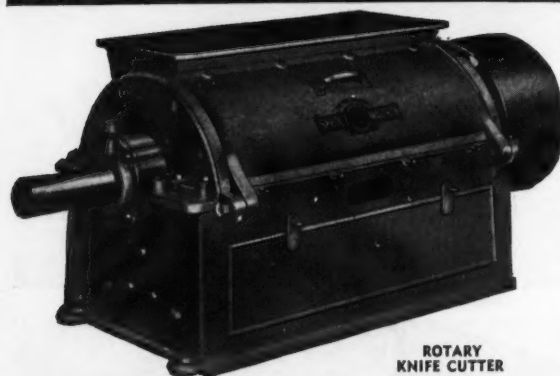
1. Better—more uniform heating
2. Increased production capacity
3. Improved quality
4. 1% fuel saving for every 11° gained
5. Increased boiler capacity
6. Less make-up water

Cochrane

COCHRANE
BECKER
SYSTEM

When inquiring specify CEP5039 — see information request blank, pgs. 2-3

TYPE SB ROTARY KNIFE CUTTER



ROTARY
KNIFE CUTTER

For Cutting, Shredding, Fiberizing, Granulating, Cracking.

Cork, corn, copra, coffee, peas, fibres, fabric, tobacco, pulp, plastics, lint, seeds are a few material examples.

If you would like to know just what this machine can do for you in product produced and in operating costs, send us a working sample of your materials.

Without obligation on your part, we will run the sample through the Test Machine which we keep ready to run for just this purpose and will provide you with complete data on the results.

The machine is unique in the field of Rotary cutting equipment in a number of design and operating features.

Bulletin F 1234—Part 2 provides details; illustrates the complete line.

SPROUT, WALDRON & COMPANY, Inc.
120 SHERMAN STREET, MUNCY, PA.

When inquiring specify CEP5040 — see information request blank, pgs. 2-3

PRODUCTION



REFLECTOR made of composition material
has high light reflectivity

New Type Fluorescent Reflector Releases Steel For Other Uses

Composition construction retains same general appearance and reflective properties

Uses—This reflector made of a specially treated composition from materials not vital to war production is designed to provide a thoroughly satisfactory replacement for current types.

Features—Adoption of this reflector will result in an average decrease of 6% in the amount of metal per fixture, thus releasing quantities of metal for more urgent needs. Its own light weight has obvious handling advantages.

Description—The new reflector is made of especially treated composition but resembles the conventional reflector in appearance. Reflecting surface is the same high-temperature synthetic enamel that has been used for some time.

HYGRADE SYLVANIA CORP., Dept. CEP, Salem, Mass.

When inquiring specify CEP5041 — see information request blank, pgs. 2-3

New Wood "Victory Sash" Saves Metal For War Needs

Simplified design saves materials, cuts installation labor and provides smooth window operation

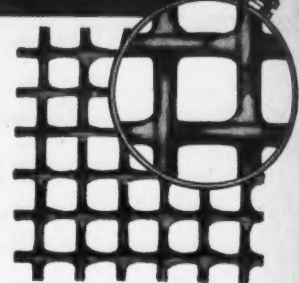
Uses—Developed to provide a suitable wood sash for industrial buildings to supplant metal types now restricted under the war program. To aid in furthering government's request that wood sash be used instead of steel wherever possible.

Features—To make this sash available to all architects, engineers and contractors engaged in designing and building war production plants, the designer and his organization waived patent rights, and offer a blueprint to those who want constructional details.

Description—Extreme heights possible in single units means savings in horizontal supporting members and maximum light for the amount of material used. In "Victory Sash" only two mullion supporting members about 2" by 4" are used. The great majority of frame members common to old fashioned wood sash are eliminated. Instead of supporting complicated frames, stops and other elements which in turn hold the sash, the 2 by 4's so called now hold the glass. Each unit is built complete in the mill and shipped to the job where it is erected between head and sill. No other frames or sill are required. At the sills, the wood sash is secured by metal clips, clamped only at the mullions with regular mullion bolts. Since most industrial buildings have 20' column centers, a 4" standard has been adopted, although this of course is subject to change. Glazing is done on the inside, a raised lug is provided to give a footing for the putty. Glass is secured by glazing clips. Victory has adapted its ventilator from steel sash. This steel ventilator designed for use in wood is made complete with hinges, pivots, slides push bar and chain pull and can be operated by hand, gang or motor operation. Sash and muntins in

Look at the Node!

... A Sure Sign of
**THOROUGH
COATING**
on "Buffalo"
**GALVANIZED
WIRE CLOTH**



In all "Buffalo" galvanized after woven wire cloth, wherever cross wires meet there's a swelling (node) of heavy zinc—the mark of the Hot Dip Process... This is your guarantee of long life and freedom from rust... "Buffalo" galvanizing gives smooth, bright coating evenly distributed... Only highest grade zinc used... All wire cloth is best grade of full gauge, uniform, plain steel wire woven accurately in the plant of this manufacturer.



40-page Catalog
and Data Book
No. 11-AC FREE
ON REQUEST.

MADE BY THE MANUFACTURERS OF
INDUSTRY'S FINEST WIRE CLOTH

Buffalo WIRE WORKS CO., INC.

ESTABLISHED 1869 AS SCHEELER & SONS
419 TERRACE BUFFALO, N. Y.

When inquiring specify CEP5042 — see information request blank, pgs. 2-3



Check

IN AT A DeWITT OPERATED HOTEL

In Cleveland
THE HOLLANDEN

In Columbus
THE NEIL HOUSE

In Lancaster, O.
THE LANCASTER

In Akron
THE MAYFLOWER

In Corning, N. Y.
THE BARON STEUBEN

The Hotels that Check with Every Travel Standard

THEO. DeWITT

PRESIDENT



When inquiring specify CEP5043 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

NOW...is the time..

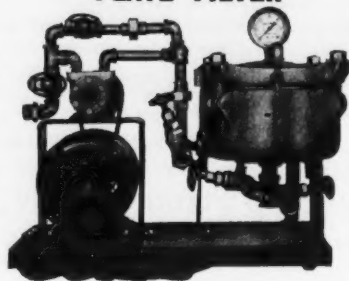
**TO CONVERT TO THE FILTER
OF PROVEN EFFICIENCY**

**THE SPARKLER
horizontal
PLATE FILTER**

Whether your problem is filtering the heaviest wax or most volatile chemical, the SPARKLER has proved its efficiency. It's the patented horizontal filter plate that makes the difference — quality unexcelled. Greater speed. Lower cost.

This horizontal plate filter allows larger cake space — longer filtering cycle. Cake cannot break or slide off — intermittent filtering possible. Cleaning time cut in half!

Write for details — Check on this too, The SPARKLER can reclaim your vital oils — cutting, lubricating, etc.



LABORATORY MODEL NO. 8-3

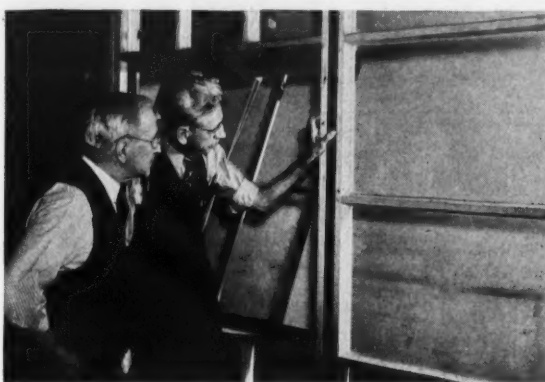
(8" in Diam. — 3 Filter Plates)

Area 1 Sq. Ft. Cake Space 144 Cu. In.
Production Models with Areas up to 152 Sq. Ft.
and Cake Space to 25.5 Cu. Ft.

SPARKLER MFG. CO. 206 LAKE ST., MUNDELEIN, ILL.

When inquiring specify CEP5044 — see information request blank, pgs. 2-3

PRODUCTION



"VICTORY SASH", sections held together by small metal strip

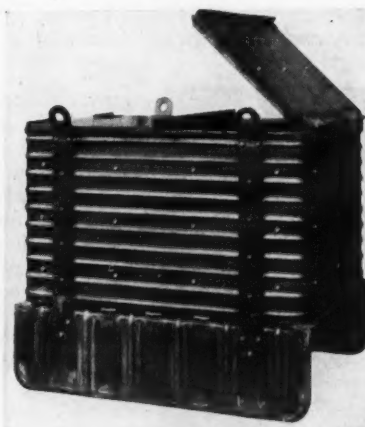
The "Victory Sash" are very simple. Moulding cut outs are eliminated and the maximum wood section is maintained for maximum strength. "Victory Sash" can also be adapted to factory and office partitions and the sash is of sufficient thickness to accommodate doors with mullions serving as door jambs. Black-out requirements can be observed by fastening sheets of plywood to the outside of the sash with sections cut out to accommodate the ventilators. Ventilator units themselves can be given black-out treatment by means of various approved methods.

ALBERT KAHN ASSOCIATED ARCHITECTS & ENGINEERS, Dept. CEP, New Center Bldg., Detroit, Mich.

When inquiring specify CEP5046 — see information request blank, pgs. 2-3

**Insulated Skid Box Simplifies
Cooling of Hot Forgings**

Sturdy, asbestos insulated box protects against flaking and supplants inefficient burying method



SKID BOX keeps hot forging from flaking

Uses — For storing and cooling forged hot forgings to provide better insurance against flaking and save the time consumed in burying them underground.

Description — Unit has 7 gauge lid, 9 gauge outer casing and 12 gauge inner casing with 3/4" asbestos lining in between. Lid is also reinforced and insulated.

Box can be filled with hot forgings, picked up by crane or lift truck, then placed out of the way until forgings have completely cooled. Supplied in sizes to meet individual requirements.

UNION METAL MFG. CO., Dept. CEP, Canton, Ohio.

When inquiring specify CEP5047 — see information request blank, pgs. 2-3



TRAMP iron costs American industry and the American war effort more time and money every day than any sabotage of enemy agents.

Ask your insurance company how many hundreds of dust explosions have been traced directly to sparks from tramp iron.

Ask the legal profession how many damage suits result from tramp iron in food.

Ask the farmers how many livestock have been lost due to tramp iron in feed.

Ask industry how many crushers, grinders and other machines have been damaged by tramp iron.

ASK YOURSELF — can I afford to be without protection against this menace?

The best protection against tramp iron that money can buy is a Dings High Intensity Magnetic Separator. Write for details.

**DINGS MAGNETIC
SEPARATOR CO.**

510 E. Smith Street, Milwaukee, Wisc.

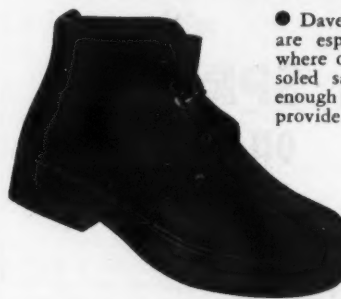


When inquiring specify CEP5048 — see information request blank, pgs. 2-3

LOW COST — COMFORTABLE

DAVENPORT

WOOD SOLE SAFETY SHOES



● Davenport Wood Sole Shoes are especially designed for use where ordinary leather or rubber soled safety shoes do not offer enough protection. Wooden Soles provide sure footing on damp, slippery floors. Hot and rough surfaces cannot injure your workers' feet. Perspiration of the feet is more rapidly dispersed with Wood Sole Shoes.

Comfort as well as foot protection is

built into all Davenport Wood Sole Shoes. Vamp and uppers are of pliable oiled grain leather. Counters are made of first grade sole leather. Thick felt insoles provide additional comfort. Soles are of close-grained maple and have correct rock from heel to toe for ease in walking.

All Davenport Wood Sole Shoes are available with Safety Toes which resist pressures up to 4000 lbs.

Wide variety of styles, each designed for a particular industry.

WRITE TODAY for FREE Catalog listing complete lines of Shoes and latest prices.

F. J. STAHER SHOE CO.

World's Largest Exclusive Manufacturer of Wood Sole Footwear

3199 Boies Avenue

Davenport, Iowa

When inquiring specify CEP5049 — see information request blank, pgs. 2-3

**Get the
MOST
out of the
STEAM
You Generate...
USE
SHUNT METERS**

And Eliminate Waste
And Guesswork
Mail this ad, clipped to your letterhead we will send Bulletin 307 and Prices.

BUILDERS — PROVIDENCE

(DIVISION OF BUILDERS IRON FOUNDRY)
47 CODDING STREET, PROVIDENCE, R. I.

When inquiring specify CEP5045 — see information request blank, pgs. 2-3

Uniform Separation

The new model GAYCO Centrifugal air separator makes possible the uniform and increased recovery of cement and other extremely fine materials within a range of 60 to 400 mesh.

- Greater Capacity
- Cleaner Trailings
- 99% Through 325 Mesh
- 25% to 30% greater recovery of fines.
- Not affected by variation in speed or rate of feed.

Manufacturers also of "Reliance" Crushers, Screens, Elevators, Conveyors, Bin Gates, Grizzlies. Complete crushing, screening and washing plants for crushed stone, sand and gravel.



Universal Road Mach'y Co.

Rubert M. Gay Division 117 Liberty St. New York, N. Y.
Canadian Representative: F. H. Hopkins & Co., Ltd., Montreal

When inquiring specify CEP5050 — see information request blank, pgs. 2-3



**Keep Your
AIR LINES Clean
with
SPRACO
OIL & WATER
EXTRACTORS**

Dirty compressed air with a high percentage of moisture and oil is very effectively cleaned by passing it through a Spraco Condensing Type Oil and Water Extractor. A cooling coil lowers the temperature and condenses the moisture and oil vapor on a series of baffles in the air stream. The accumulated oil and water is discharged through an automatic drain valve. Made in 2 sizes of 40 and 100 cubic feet for working pressures up to 125 pounds.

Write for "CONDENSING TYPE OIL AND WATER EXTRACTOR BULLETIN"
SPRAY ENGINEERING CO.
113 Central St., Somerville, Mass.



When inquiring specify CEP5051 — see information request blank, pgs. 2-3

EQUIPMENT FOR PRODUCTION

Check Valves in Wide Range For Water, Oil, Gas and Acid Lines

Valve disc and seat easily replaced without special tools; integral spring ring

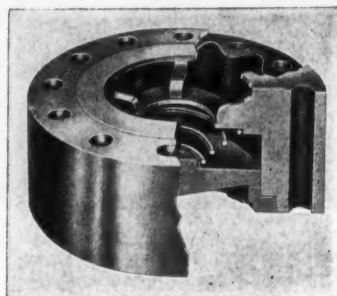
Uses — For use in waterworks, oil refineries, chemical plants, air conditioning systems, hydraulic services, boiler feed, water supply and other non-return flow lines. In general for all pump lines handling water, oil, gas, acids, alkalis and other fluids.

Features — Compact in design. Only two parts — valve disc and seat — subject to wear. Spring ring built as integral part of body. Valve disc and seat easily replaced without special tools.

Description — Manufactured of bronze, cast iron, steel, stainless and monel metal for pressures varying from 150 to 2,500 lbs. to meet American standard. Sizes range from 1 in. to 20 in. inclusive. Complete information on these flanged silent check valves available from manufacturer.

WILLIAMS GAUGE CO., Dept. CEP, 2016 Pennsylvania Ave., Pittsburgh, Pa.

When inquiring specify CEP5052 — see information request blank, pgs. 2-3



CHECK VALVE has integral spring ring

Aluminum Element Flame Arrestor For Volatile Liquid Tanks

Prevents entrance of flame through vent; element resists corrosion and has large net free area



FLAME ARRESTOR . . . with element partially removed for inspection

Uses: To protect volatile liquid storage tanks and lines carrying explosive gases from fires and explosions. Although permitting free passage of vapors to act as a positive stop against flame entering the tank should these vapors become ignited.

Features: Manufacturer states that no tight tank, equipped according to

specifications, even when surrounded by blazing tanks, resist corrosion. Large net free area makes for high flow efficiency. Minimum of pressure drop.

Description: Equipment consists of strong rigid housing with cover and an all aluminum flame-arrestor element. Housing and its covers are of cast semi-steel and can stand prolonged exposure to heat and flame. Arrestor elements are alternate flat and corrugated sheets of pure aluminum. Construction results in vertical straight through passages, minimizing any tendency to retain moisture and foreign materials and offering minimum resistance to gas flow. Arrestor element is inspected easily by simply unloosening the four hand wheel on the cover, pulling out element on slide rails and looking through the straight passages. Arrestors are available in 2, 3, 4, 6, 8 and 10 in. sizes. Approved by Underwriters' Laboratories, Inc.

THE JOHNSTON & JENNINGS CO., Dept. CEP, 877 Addison Rd., Cleveland, Ohio.

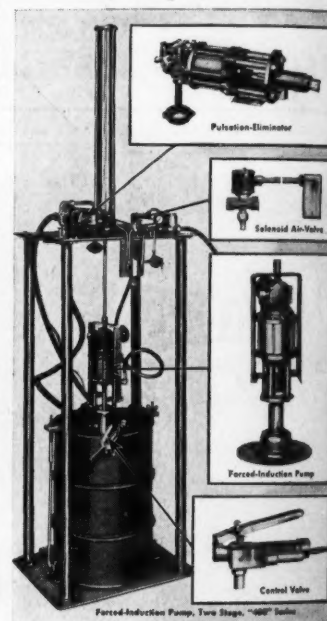
When inquiring specify CEP5053 — see information request blank, pgs. 2-3

Pump Handles Heavy Materials Direct From Containers

Two stages; single where pulsation in flow is permissible; two stage, employing pulsation eliminator to assure uniform performance

Uses — To dispense heavy viscous materials such as sealing compounds, sound deadners, insulating materials, putty and heavy lubricants. Used on refrigeration production lines to deliver sealing and insulating compounds. Used to deliver materials right from the original containers without the use of heat to reduce the material to the consistency that would ordinarily be required before it could be pumped.

Features — Saves time and labor and waste involved in manual operations. Speeds up assembly line production.



PUMP HANDLES heavy materials from containers

Description — This type of pump called the "Piledriver," is available in two models, both of which employ a powerful air motor. The "100" is for pumping materials from containers up to 100 lbs. capacity and the "400" for handling materials in 400 lb. drums. Each can be obtained as a single or two staged unit. The single stage is used where pulsation in the flow of materials is permissible. The two stage has a pulsation eliminator and delivers the extruded material at an even rate of flow and in uniform shape as desired. Both models have hand shut off valve at the outlet.

LINCOLN ENGINEERING CO., Dept., CEP, 5701 Natural Bridge Ave., St. Louis, Mo.

When inquiring specify CEP5054 — see information request blank, pgs. 2-3

PRODUCTION

Surface Wiring Systems Easy And Inexpensive to Install

Permits spanning beams; eliminates pipe threading



WIRING UNITS eliminate pipe threading

tool and appliance power outlets in production areas, engineering departments, laboratories and plant office buildings.

Features—This type of installation requires no pipe threading equipment and reduces material waste. Sections and parts easily installed with few tools.

Description—This simplified network type of electric wiring installation is made possible by newly developed fittings and methods utilizing raceways of special design. The system and the units comprising it are identified as No. 3,000 type. The No. 3,000 channel and special hanger fittings permits spanning of beams. A minimum number of slip joint fittings cover all installation methods and requirements. Method requires no pipe threading equipment. Installations for fluorescent lighting can be completed by using the same basic channels with reflectors, ornamental glass enclosures hangers and fittings.

WIREMOLD CO., Dept. CEP, Hartford, Conn.

When inquiring specify CEP5055 — see information request blank, pgs. 2-3

Plug-In Duct Meets Sudden Need For Additional Power Outlets

Furnished in capacities of 250, 375, 500, and 1,000 amperes, in 2 and 3 wire single phase, 3 phase and 4 wire service

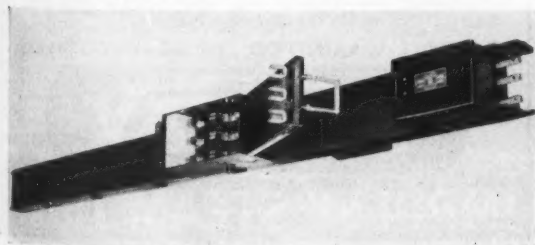
Uses—An economical and efficient method of providing additional outlets for electrical energy requirements in modern industry. For cases where original installations are inadequate or inaccessible.

Features—Flexibility of this system provides for quick and easy installations at reasonable cost. Designed to permit additions of other units as needed.

Description—Duct is available in capacities of 250, 375, 500, 750, and 1,000 amperes in 2 and 3 wire single phase, 3 phase and 4 wire service. Round tubular buses are used for 250, 375 and 750 capacities. Solid, round, bus bars for 500 and 1,000 amperes. These round bus bars are contained in steel housing which is produced in standard 10" lengths. Six openings are provided on each side of a 10" length accommodating twelve plug in units.

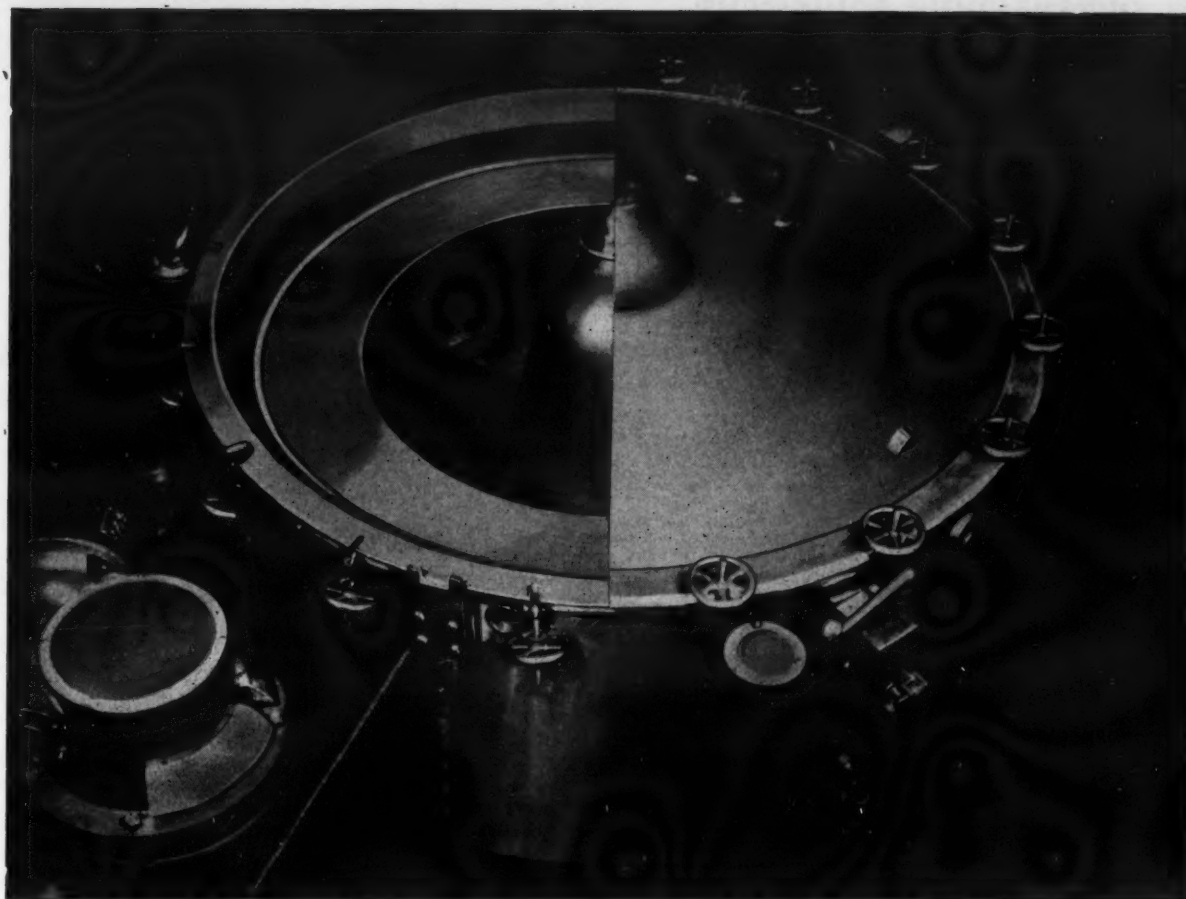
SQUARE D CO., Dept. CEP, 6060 River Road, Detroit, Mich.

When inquiring specify CEP5056 — see information request blank, pgs. 2-3



PLUG-IN DUCT for scattered outlets

Uses — To provide a complete surface wiring layout for lighting or for portable



How Many Years B. C. Is Your Plant?

If your plant is still "B. C." — *Before Centrifugals* — this may be a good time to plan on an "A. C." future. A future of increased production, lower costs, more profitable operations . . . perhaps a wider market . . . with the help of A T & M.

For many plants, "B. C." meant slow, space-consuming equipment in extracting, precipitating, dehydrating, impregnating and coating processes—kiers, autoclaves, tanks, filters, drying machinery.

For those plants, centrifugals engineered by A T & M have often doubled production, cut floor space requirements in half, combined a delicate or otherwise impossible series of operations in one swift, space-saving machine.

No Improvement Since Aristoteli . . . A T & M Solved This Separation Problem

No improved method of extracting oil

from the rind of a fruit had been discovered since ancient times . . . until A T & M engineers went to work on this customer's problem. Proper speed and cycle were quickly found, but, in the necessarily imperforate basket, the oil could not be completely extracted until A T & M devised an ingenious method of adding water at the end of the centrifuging cycle. Final results: more oil in less time from one quick, smooth, continuous operation.

But, in addition to difficult engineering applications, standard A T & M centrifugals in all machineable metals and coatings . . . link suspended, suspended or base-bearing . . . are in service throughout the process industries, and are available to you as national needs permit. A T & M engineers, with due regard to present emergency conditions, will con-

sult with you without cost or obligation. Address American Tool & Machine Co., 1425 Hyde Park Avenue, or 30D Church St., New York, N. Y.

VICTORY FIRST . . .

But A T & M can also help you win the peace. Plan now on the big savings centrifuging can provide in all operations involving:

Extraction	Precipitation
Dehydration	Impregnation
Filtration	Coating

A T and M

A T & M CENTRIFUGALS SAVE TIME AND MONEY

When inquiring specify CEP5057 . . . see information request blank, pgs. 2-3

OUTSTANDING EQUIPMENT NOW IN STOCK:

- | | |
|---|---|
| <p>1—36" Copper Column, 33' High</p> <p>2—2100 Gal. STAINLESS STEEL TANKS</p> <p>1—2500 Gal. Jacketed Copper Vacuum Pan 7' x 9'8"</p> <p>3—Pebble Mills — Porcelain Lined 7' x 6' and 6' x 6'</p> <p>2—Pebble Mills — Silex Lined 42" x 52" and 42" x 60"</p> <p>26—Devine, Worthington, Blake & Knowles Vacuum Pumps from 70 CFM to 800CFM</p> <p>1—Devine 20 Shelf 42" x 42" Vacuum Shelf Dryer</p> <p>Large Stock of Surface Condensers and Receivers</p> <p>1—Bethlehem Cast Iron Nitrat 8' x 4'6". Jktd. Agit.</p> <p>5—14,000 Steel Storage Tanks, welded, horizontal</p> <p>3—4000 Gal. Steel Pressure Tanks, 8' x 10'</p> <p>2—Bonnett Direct Heat Dryers 6' x 65'</p> <p>2—Devine Rotary Vacuum Dryers, 5' x 30'</p> | <p>5—Rotex Sifters, No. 7 size 40" x 84" Shrier 42" x 42" Filter Press Skeletons, 27' Bars</p> <p>1—Struthers Wells Triple Effect Evaporator</p> <p>3—60 Gal. Copper Vacuum Pot Stills</p> <p>2—35 Gal. Glass Lined Unjacketed Vac. Pans, with agit.</p> <p>1—Stokes 18" x 24" Atmospheric Drum Dryer</p> <p>1—New Jersey Mach. Co. Pony Labelrite</p> <p>1—W. & P. Baker Perkins 200 Gal. Unjack. Mixer</p> <p>1—W. & P. Baker Perkins, 150 Gal. Jktd. Vac. Mixer</p> <p>1—Bird Centrifugal Filter 40" suspended; stainless</p> <p>1—Tolhurst Centrifugal Extractor Rubber Lined Curb and Monel Basket</p> <p>1—Continuous Steel Ball Mill 5' x 8'</p> <p>3—Colton Tablet Machines No. 2, No. 4 and 4½</p> <p>1—Stokes BB Rotary Tablet Machine Pony Mixers, one 50 Gal., two 40 Gal., five 15 Gal. and one 8 Gal.</p> |
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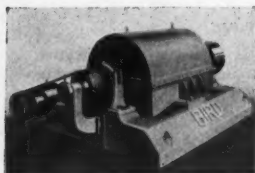
FLASH. The government is making a concentrated and determined drive to scrap every machine or unit not in production. It is better for every plant to sell their SURPLUS as MACHINES NOW than to have them confiscated later as scrap metal. We can put most machines back into WAR PRODUCTION.

FIRST MACHINERY CORPORATION		
GUARANTEED EQUIPMENT	F M C	LIQUIDATORS APPRAISERS
EAST 21st STREET and EAST RIVER DRIVE	GRUPO 7-6622 LONG ISLAND CITY	NEW YORK, N. Y.

When inquiring specify CEP5058 — see information request blank, pgs. 2-3



is helping a constantly growing number of producers of vital-for-victory materials to "beat the promise."



The Bird Centrifugal Filter handles crystalline or amorphous, coarse or fine solids in thick or thin, hot or cold slurries. Operation is clean, rapid, continuous, totally enclosed, — and fume-tight, if desired.

The number and variety of filtering applications for which this has been conclusively demonstrated warrants the suggestion that you find out what the Bird Filter can do to step up your production-for-victory effort.

BIRD MACHINE COMPANY
SOUTH WALPOLE • MASSACHUSETTS

When inquiring specify CEP5059 — see information request blank, pgs. 2-3

PRODUCTION



ADHESIVE TAGS . . . to meet individual requirements

Use Adhesive Instead of Metal For Tags and Name Plates

*Material requires no moistening before applying;
gives durable service on smooth surfaces*

Uses — Metal conservation has necessitated substitutions for the steel tags, name, identification and other plates widely used. A new adhesive product, "Kum-Kleen," is offered for use wherever such tags or plates have formerly been required.

Features — No moistening is required in applying this product. Economical in initial cost they afford further savings by eliminating the drilling, tapping or riveting necessary in the application of metal plates.

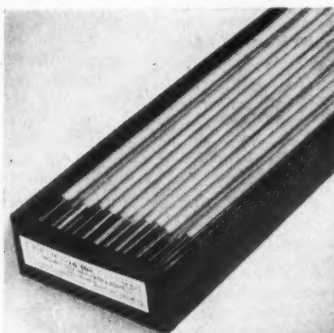
Description — This adhesive material is extremely durable and is applied without moistening to any smooth surface including metal, glass, plastic, enamel, varnish and wood. Adhesive properties are retained when exposed to high temperatures and changing climatic conditions.

AVERY ADHESIVES, Dept. CEP, 451 E. Fourth St., Los Angeles, Calif.

When inquiring specify CEP5060 — see information request blank, pgs. 2-3

New Hard Facing Rods Available Under A-10, P-100 Ratings

*Offered in numerous sizes for both oxyacetylene and
D. C. electric application*



HARD FACING RODS . . . available
under A-10 & P-100 ratings

tural tools, cement mill parts, brick and clay equipment, dredging and excavating units and similar applications.

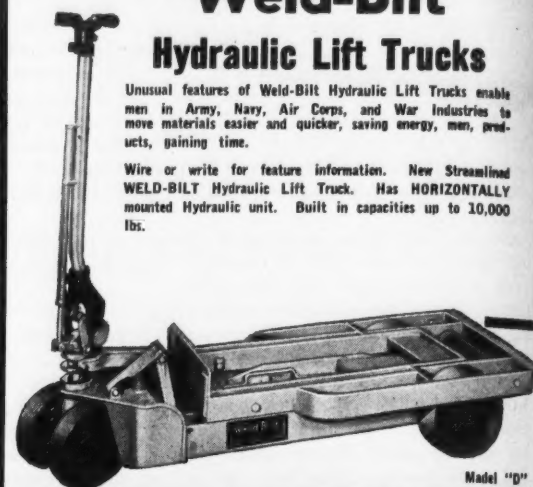
Uses — These two hard facing rods provide new hard facing alloys which are available under the A-10, P-100 rating. They have been designed to meet the needs for companies unable to furnish high priority ratings. Identified as "Stoodite K" and "Stoody Self-hardening K." The first is recommended for hard facing on agricultural tools, cement mill parts, brick and clay equipment, dredging and excavating units and similar applications.

Meet Your Stepped-Up Production Schedules Easier with

"Weld-Bilt" Hydraulic Lift Trucks

Unusual features of Weld-Bilt Hydraulic Lift Trucks enable men in Army, Navy, Air Corps, and War Industries to move materials easier and quicker, saving energy, men, products, gaining time.

Wire or write for feature information. New Streamlined WELD-BILT Hydraulic Lift Truck. Has HORIZONTALLY mounted Hydraulic unit. Built in capacities up to 10,000 lbs.



Model "D"

WEST BEND EQUIPMENT CORPORATION
Materials Handling Engineers
226 S. Water Street • West Bend, Wisconsin
Manufacturers of Portable Electric Elevators, Two Wheel and Four Wheel Trucks, Skid Platforms, Barrel Racks, Trestling Machines, and special equipment.

When inquiring specify CEP5061 — see information request blank, pgs. 2-3

QUICKER HEATING

- Small Size
- Light Weight
- One Moving Part
- Low Price



OVER
130,000
SOLD

Sold by more than 100 Mill Supply Distributors throughout the U. S. A. See your supply house or write for Catalog T-1736.

YARNALL-WARING CO., 125 Mermaid Ave., Phila.

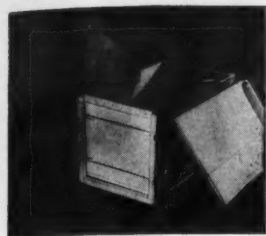
YARNWAY

IMPULSE STEAM TRAP

When inquiring specify CEP5062 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

GENERAL All-Bounds



**ELIMINATE
DELAYS
BEFORE THEY
REACH YOUR
PLANT**

Here's the way producers of many chemical products are keeping their shipping in step with production. The use of General All-Bounds eliminates lost motion. They arrive two-thirds assembled, even an inexperienced man can complete the assembly easily and quickly. No nails are used. Sides and ends are securely joined by use of a simple tool. Securely sealed by Rock Fasteners, this weight-saving container has the strength of steel on all six faces.

Used for the faster packing of

products weighing up to 500 lbs., it reduces tare weight as much as 50%. Shipped to you as one-piece shooks, they are stored flat—take a fraction of the space necessary for made-up containers.

General All-Bounds, Wire-bounds, crates and special containers are available from 13 strategically located plants and offices blanketing industrial America. SEND FOR THIS BROOKLET.



GENERAL BOX COMPANY

General Offices: 522 N. Dearborn Street, Chicago, Ill. District Offices and Plants: Brooklyn, Cincinnati, Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, New Orleans, Sheboygan, Winchendon. Continental Box Company, Inc.: Houston, Dallas.

When inquiring specify CEP5063 — see information request blank, pgs. 2-3

THIS PUMPING TRAP MAY BE *your* ANSWER

SCORES of plants have already found the Johnson Electrap the answer to a lot of pumping problems that formerly required expensive steam or electric pumps, or cumbersome tilting traps. For draining vacuum lines it is equally outstanding—is operating in many cases under vacuum as complete as 27" of mercury.

The basic difference that makes such performance possible is the Electrap's new electrical system of operation. And right there you have two more important answers—absolute dependability and, for the first time, remote control (see diagram).

Don't overlook the Johnson Electrap for your plant. Its wider range of application may hold your answer to the problem of how to speed, and make more efficient, the building of America's war machine.

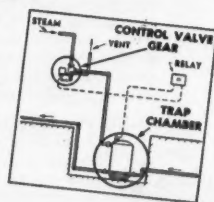
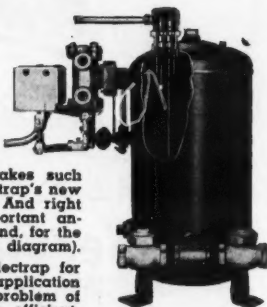
AT LAST!—a pumping trap with remote control

Here is an answer for those frequent piping layouts in which the trap chamber must be installed in an inaccessible corner or pit. As shown at right, all controlling valve gear—all moving parts—are gathered in one compact assembly, which can be mounted independently of the trap chamber in any convenient location.

Write for bulletin

THE JOHNSON CORP., 826 Wood St., Three Rivers, Michigan

The Johnson Electrap



DUST COLLECTOR
removes health hazard

powerful fan. Dust remains on the interior surface of the bags and is removed by means of hand-shaker attachment or automatic motor driven device. Heavier dust goes directly to the dust compartment. Both the compartment and the dust bags are easily accessible. Dimensions of the cabinet: 23" by 30"—9' 4" high.

LEIMAN BROS., Dept. CEP, 123 Christie St., Newark, N. J.

When inquiring specify CEP5066 — see information request blank, pgs. 2-3

PRODUCTION

The second may be used on roll crushers, conveyor buckets, dredge pump impellers and on a variety of equipment subject to both severe wear and impact.

Features—Both available under A-10, P-100 rating.

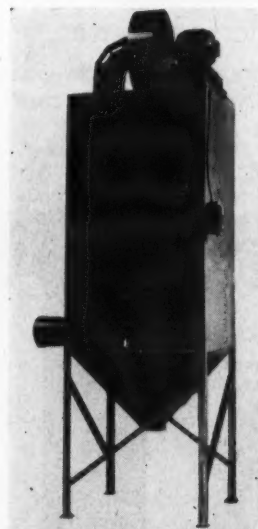
Description—"Stoodite K" is a cast hard facing rod consisting of molybdenum, tungsten, manganese, silicon, carbon and iron. In bare form for oxyacetylene application and coated form for D. C. electric. Sizes, 1/8, 3/16, 1/4, 5/8, and 3/8 inches. Rod length 14 in. Deposits average 54-58 on Rockwell scale, depending on type of parent metal and method of application. Forms smooth, dense deposits free from porosity and shrinkage cracks. Withstand much pressure and impact if properly supported and resistant to all types of abrasive wear. "Stoodite Self-hardening K" is composed principally of molybdenum, manganese, silicon, carbon, vanadium and iron. Made in form of tubes with alloys mixed on inside. Supplied for both oxyacetylene and electric D. C. Sizes, 1/8, 3/16 and 1/4 inches. Electric rod length, 14 inches, acetylene, 28 inches. Rockwell average 50-54. Wear and impact resistance. Can be used to hard face various types of manganese equipment. Deposits can be forged providing forging is done at red heat.

AIR REDUCTION SALES CO., Dept. CEP, 60 East 42nd St., New York, N. Y.

When inquiring specify CEP5065 — see information request blank, pgs. 2-3

Dust Collector Requires No Outdoor Exhaust

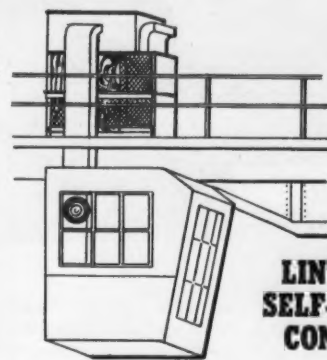
Provides for direct connection to grinders, saws, filers, lathes and other machines



Uses—Separating and collecting both coarse and the finest dust particles from the air in shops and factories. Returning the air again to the work room fit for breathing.

Features—Device may be connected to individual or groups of machines such as grinders, polishers, sandblast machines, saws, filers and lathes. May be used with outside-of-build-exhaust.

Description—Unit consists of rectangular metal cabinet in which are cloth bags of a special weave and designed to separate dust from air. Air is carried by suction from the point of dust creation through a pipe to the cabinet. Suction is created by



NEW LINTERN-AIRE SELF-CONTAINED CONDITIONER

★ Ideal for overhead cranes with small cabs (up to 185 cubic feet) operating in temperatures as high as 150 degrees . . . being applied to forge shop cranes, coil storage cranes and others with excessive temperatures.

One unit, alone, contains complete filtering and cooling mechanism. It is designed for location above the cab on the foot walk so that the only space required in the cab is for the air diffuser. In general design, this Lintern Self-Contained Conditioner resembles the large Lintern-Aire Conditioner and has sufficient capacity to deliver wide temperature differentials under peak operating temperatures without overload. Heater is available.

It comes complete with operating control ready for connection to power circuit. And — the cost is surprisingly low for the splendid job the unit does. Ask for literature.

THE LINTERN CORPORATION

56 LINCOLN AVENUE

BEREA, OHIO

When inquiring specify CEP5067 — see information request blank, pgs. 2-3

WHITNEY Platform Conveyor CHAINS



Give

"KID-GLOVE HANDLING"
to Valuable Products

This manufacturer's pharmaceutical products get safe, smooth, sanitary handling on level-top Whitney Platform Chains. Breakage is avoided . . . container-bottoms are not soiled. And Whitney Platform Chains are built on standard Whitney alloy-armored-steel Roller Chains . . . to give extra service life under today's non-stop operating conditions.

THE WHITNEY CHAIN & MANUFACTURING COMPANY, HARTFORD, CONN.

When inquiring specify CEP5068 — see information request blank, pgs. 2-3

When inquiring specify CEP5064 — see information request blank, pgs. 2-3



**PHELPS DODGE
INSTALLS MULTICLONES
AT MORENCI**

• 450,000 c.f.m. of converter gases at 500° F. will be handled by this MULTICLONE installation at Morenci.

• MULTICLONE Collectors were chosen on the basis of their efficiency and economy as proved in the Phelps Dodge, Douglas Arizona plant.

• MULTICLONE Collectors are compact and may be located in otherwise useless space. Being

all metal they are fireproof. They handle hot gases and may be jacketed to conserve heat for use in the plant.

• MULTICLONES can be provided for any capacity from a few c.f.m. to hundreds of thousands with collection efficiencies to meet specific requirements.

Full information is available about test units for actual demonstration in your plant.

MULTICLONE COLLECTORS

WESTERN PRECIPITATION CORPORATION
Engineers, Designers and Manufacturers of
Equipment for Collection of Suspended
Materials from Gases and Liquids

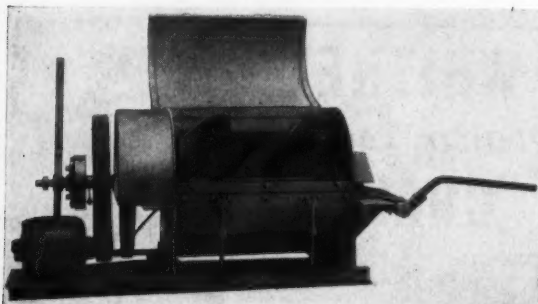
Main Offices: 1923 W. Ninth St., Los Angeles, Cal.
New York: Chrysler Bldg., N. Y. C. • Chicago: 149
S. Dearborn St., Chicago, Illinois • San Francisco:
Hobart Bldg., San Francisco, Calif.

PRECIPITATION COMPANY OF CANADA, LTD.
Dominion Square Building, Montreal



SEND FOR
THIS
BULLETIN

When inquiring specify CEP5069 — see information request blank, pgs. 2-3



**Here's a Mixer
that is fast and efficient
—read the description**

Cut shown has end discharge Number 1. It can be had in either end or side discharge.

Number 2 — all bearings guarded and SKF bearings are used.

V-Belt motor drive or geared head motor drive.

Number 4 — rubber sealed cover to keep any dust from escaping.

Discharge door — Number 1 rubber sealed.

Built in capacity from 5 to 60 cubic feet.

Write for full information

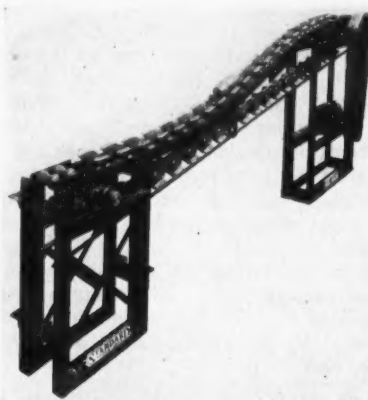
**The Multiplex Concrete Machinery Co.
Elmore, Ohio**

When inquiring specify CEP5070 — see information request blank, pgs. 2-3

PRODUCTION

"V" Design Shell Conveyor Pallets Symbolic and Practical

Quick handling and protection of finished units



SHELL CONVEYOR . . . rubber faced pallets provide for transfer between this and other conveyors. STANDARD CONVEYOR CO., Dept. CEP, North St. Paul, Minn.

When inquiring specify CEP5071 — see information request blank, pgs. 2-3

Many Old Problems Eliminated in New Oil Immersed Starter

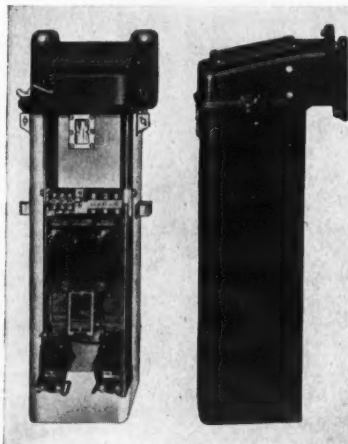
Easy installation, accessibility, tank using minimum quantity of oil, window-type gauge drain cock recessed in bottom

Uses — For use in chemical plants, oil refineries, munitions factories and wherever explosive or corrosive gases are present.

Features — Easy installation and accessibility.

Description — Starter has cast head with a wiring manifold which permits conduit entrance from five directions. Removable cover plate facilitates the threading of bare wire through an insulating spacer above the oil bath.

Welded seam tank requires a minimum of oil. Window-type oil gauge provides quick, clear visibility. Drain cock recessed at bottom. Track type guides prevent swinging, splashing or accidental collision with starter panel while the tank is being raised or lowered. Hooks at bottom of guide track support the tank in lowered



OIL IMMERSSED STARTER . . . easily installed, used and serviced

Uses: Especially designed for handling shells in munitions manufacturing.

Features: "V" shape steel carriage is integral with single strand of chain. These "V" shaped pallets are lined with rubber facing to protect the finished shell with its steel band.

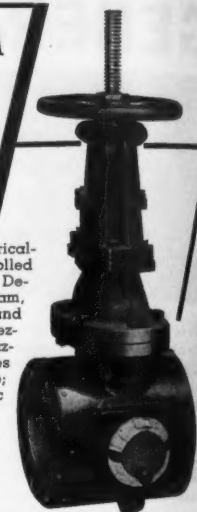
Horizontal loading points

MORE THAN A VALVE It's Electrically Heated by STA-WARM

This is a Sta-Warm electricaly-heated 5" valve, controlled by a variable thermostat. Designed for service on steam, water, oil, wax, asphalt and other lines to eliminate freezing, congealing, use of hazardous open flames. All types and sizes of valves available; heated insulation; thermostatic or rheostat control.

Also Compound Heaters

Sta-Warm can also help you in the precision heating of the materials which pass through heated valves. . . . Sta-Warm Electric Compound Heaters are available in any size, shape or capacity — for any specified heat control — for any type of compound. Complete engineering assistance available on request. Write today and get the full story on Sta-Warm complete compound heating services.



STA-WARM
ELEC. CO.
999 N. Chestnut St.,
Ravenna, Ohio

Sta-Warm

**Complete Equipment for Heating,
Pouring, Conveying Compounds**

When inquiring specify CEP5072 — see information request blank, pgs. 2-3

DEPENDABLE GAS PROTECTION

FOR THE CHEMICAL
INDUSTRIES WORKER



M.S.A.

**All-Service
GAS MASK**

(U. S. BUREAU OF MINES-APPROVED)

This famous Mask offers approved protection against all industrial gases, fumes and smoke — including carbon monoxide — encountered singly or in combinations . . . plus the wide-angled vision, easy breathing, wearing and working comfort that make it outstanding in the worker's preference. Details in Bulletin EA-6.

M. S. A. INDUSTRIAL GAS MASKS

Industry's standard mask, with All-Vision Facepiece, for specific protection against a wide range of individual gases, and with interchangeable canisters meeting each hazard. Bulletin ED-7.



MINE SAFETY APPLIANCES CO.

BRADDOCK, THOMAS & MEADE STS., PITTSBURGH, PA.
DISTRICT REPRESENTATIVES IN PRINCIPAL CITIES

When inquiring specify CEP5073 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

Remove Packings
this EASIER way



Use DURA HOOKS

Sturdy ALL STEEL Packing Pullers

A dependable hand tool designed for severe service. A time saver . . . a labor saver. Has a flexible steel cable shaft with a tempered tool-steel corkscrew bit. Made in 6 sizes. Guaranteed.

WRITE FOR DESCRIPTIVE



BULLETIN AND PRICES

DURAMETALLIC

CORPORATION

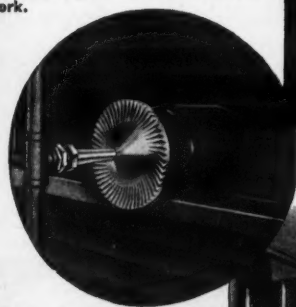
KALAMAZOO

MICHIGAN

When inquiring specify CEP5074 — see information request blank, pgs. 2-3

THIS SPRAY FILM IS YOUR DEFENSE FOR CLEANER AIR

Designed to meet special plant requirements for cleaning air, removing dust or for process work.



BUILT FOR
THE JOB!

Murray Air Washers embody the patented Murray Spray Wheel that does not clog with sediment or particles in the water, and is self-cleaning at all times. Its efficiency is maintained throughout the entire operating cycle. Lowest maintenance cost. Its one piece construction eliminates possibility of breakdowns, and because of its design furnishes a steady, dependable and uniform spray film. Each installation is engineered to meet your plant requirements. Send us details of what you need—air volume, area, etc. for our recommendations.

D. J. MURRAY MFG. CO.
WAUSAU, WISCONSIN

When inquiring specify CEP5075 — see information request blank, pgs. 2-3

PRODUCTION

position for inspection. The magnetic overload relays are easily adjustable to meet prevailing conditions of application. Either hand or automatic reset furnished. Removal of tank from a combination starter automatically throws the breaker to "off" position. Offered in two types: (1) Corrosion resisting and (2) Explosion resisting for Class 1, Group D hazardous locations. Either can be furnished with any of the following four types of motor control equipment. Class 8537 line voltage starters, Class 8539 combination starters, Class 8737 reversing starters, Class 8810 two speed starters.

SQUARE D CO., Industrial Controller Div., Dept. CEP, 4041 No. Richards St., Milwaukee, Wis.

When inquiring specify CEP5076 — see information request blank, pgs. 2-3

Gloves of New Synthetic Fabric Have Strength, Flexibility

Convenience and comfort for those working with oils, greases, acids and caustics

Uses — For workers who must be exposed to oils, greases, solvents, caustics, acids, corrosives and abrasives.

Features — Work tests are said to have shown these gloves possess several times the wearing capacity of latex treated types. Also have unusual flexibility.

Description — Lined with sturdy napped canton flannel of top quality, will not snag. Available in knit wrist style and gauntlet type in 10, 12½, 14½ and 18 in. overall length.

EDMONT MFG. CO., Dept. CEP, 544 Orange St., Coshocton, Ohio.

When inquiring specify CEP5077 — see information request blank, pgs. 2-3

Repair Process Extends Life of Protective Rubber Clothing

Greatly reduces replacements of articles now difficult to obtain

Uses — The service referred to here is designed to aid those whose replacement of vital needs are becoming more difficult because of the critical rubber situation. By this process, products in repairable condition can be made fit again for extended and satisfactory service.

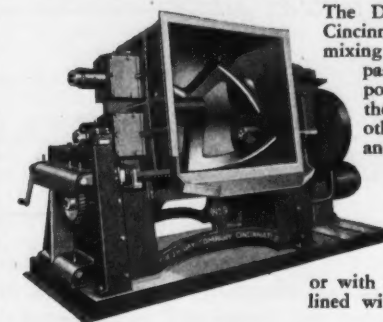
Description — Service available nationally. Included in the variety of articles that can be treated are belts, hose, boots, aprons and gloves. Complete information is available upon request.

RUBBER RE-NU CORP., Dept. CEP, 18 Murray St., New York City

When inquiring specify CEP5078 — see information request blank, pgs. 2-3

DAY-----

CINCINNATUS MIXER



The DAY Heavy Duty Cincinnati Mixer for mixing of storage battery pastes, rubber compounds, clays, synthetic resins, and for other heavy pastes and plastics, and can be furnished in working capacities from 5 to 775 gallons; with or without jacketed tanks; or with tanks made of, or lined with special metals.

PONY MIXER (Gearless Type)

The DAY Balanced Top, Pony Mixer (Gearless Type) for printing inks, paint pigments and other light pastes. The vertical blades revolve while the can rotates in the opposite direction, bringing all parts of the mass under the action of the mixing blades. Stationary scraper blades keep material from accumulating on sides of can.



The top casting is balanced with counter-weights enabling the agitator to be easily tilted. Both the agitator and the can are driven by heavy roller chains. It is built in five sizes having capacities of 40, 50, 75, 100 and 125 gallons.

RO-BALL "Stabilized" GYRATING SCREENS

The DAY Ro-Ball "stabilized" Gyration Screens are built in 14 sizes, providing maximum screening capacity per square foot screen area.



Makes a clean accurate separation of the most difficult material. The DAY Super-Active Ball Cleaning Device insures a clean and open mesh at all times, with from two to five separations.

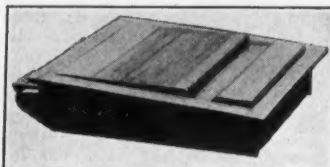
THE J.H.
DAY COMPANY.....
CINCINNATI-Ohio

When inquiring specify CEP5079 — see information request blank, pgs. 2-3

NIAGARA PERMAFLUX MAGNETIC SEPARATORS

CONSTRUCTED OF "ALNICO"

THE NEW MAGNET ALLOY



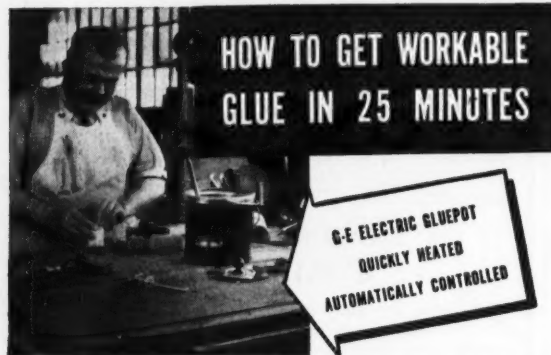
A guaranteed magnet as strong as an electro-magnet. The FIRST permanent magnet with Class "A" Insurance Rating.

The introduction of "Alnico", the result of intensive research into the composition of magnet alloys, has made possible this exceptionally strong permanent magnet. The PERMAFLUX retains its great strength undiminished through years of service.

For wood or metal chutes or spouts, in various sizes. We invite your inquiries.

RICHMOND MFG. CO.
MANUFACTURERS OF **LOCKPORT**
HI-SPEED GYRATORY SCREENS
MAGNETIC SEPARATORS, ETC. **N. Y.**

When inquiring specify CEP5080 — see information request blank, pgs. 2-3



HOW TO GET WORKABLE
GLUE IN 25 MINUTES

G-E ELECTRIC GLUEPOT
QUICKLY HEATED
AUTOMATICALLY CONTROLLED

For jobs requiring glue in a hurry, automatic G-E gluepots are your answer. You can depend on them for speed. Heat one quart to correct gluing temperature in only 25 minutes. Automatic control, too. Glue is kept at constant temperature accurately. Recommended for gluing patterns, ship models, designs which require use of wood and paper products, and similar applications.

Cat. No.	Quarts	Price
6A126	1	\$18.00
6A111	2	\$20.00
6A139	4	\$24.00

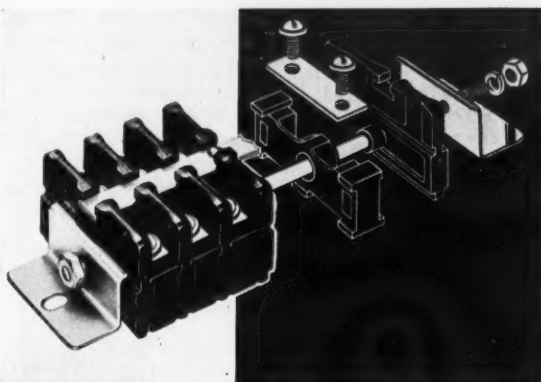
For 115 volts, pots are also available at same price for 230 volts.

Order from a G-E distributor, our nearest office, or direct from General Electric Co., Schenectady, N. Y.

GENERAL ELECTRIC

When inquiring specify CEP5081 — see information request blank, pgs. 2-3

EQUIPMENT FOR PRODUCTION



BUILT-UP TERMINAL BLOCK . . . assembled to requirements

Terminal Block Parts In Kits Meet Varying Requirements

Easily assembled to provide service desired, two styles of kits cover practically all requirements

Uses: Especially adapted for manufacturers and experimental laboratories whose terminal requirements are varied. **Features:** Assembled in two kits to facilitate ordering. **Description:** Blocks furnished in kit form or sets of parts unassembled. One kit, identified as CDM-100, contains 50 center barriers and terminals. Another, CDM-101, contains five sets of end barriers, mounting brackets, marking strip, threaded through rod and other necessary hardware. Blocks are easily assembled and solve the problems often involved in special requirements. Moulded parts have a tensile strength of 4,000 lbs. per sq. in. Voltage breakdown at 60 cycles (50% relative humidity) is approximately 375 volts per mil. All blocks assembled at the factory are subject to a 2,500 volt flash test to ground.

CURTIS DEVELOPMENT & MFG. CO., Dept. CEP, 1 No. Crawford Ave., Chicago, Ill.

When inquiring specify CEP5082 — see information request blank, pgs. 2-3

Self-Aligning Idler Automatically Centers Flat Conveyor Belts

Corrects misalignment caused by stretch in belt or uneven loading; no side guide rolls to wear belt edge



SELF-ALIGNING IDLER . . . with counterweighted end disc

Uses — This self-aligning idler for flat conveyor belts, both return and carrying is designed to help keep the belt central on its supporting idlers, thus lengthening its life and increasing its efficiency. **Features** — No side guide rolls, which often impose unnecessary wear on the belt edge are used. **Description** — When conveyor belt runs to one side it tends to swivel the idler in a horizontal plane. This will usually cause the idler to make the belt throw back immediately.

However where this is not immediately accomplished, the belt continues traveling to one side until it contacts a counterweighted end disc, which is slightly larger in diameter than the idler roll. This contact with the counterweight tends to rotate it but it resists this tendency, producing a counter-force on the idler. This causes the idler to swivel rapidly, throwing the idler more out of line, forcing the belt to swing back the other way. These self-aligning idlers can be spaced at intervals between stationary idlers to rectify misalignment caused by stretch or weave in the belt, uneven loading or shifting of conveyor frame.

CHAIN BELT CO., Dept. CEP, 1600 West Bruce St., Milwaukee, Wis.

When inquiring specify CEP5083 — see information request blank, pgs. 2-3

Equipment at Work in Oil Fields

Magazine style, eight-page-with-cover booklet, presents an interesting review, largely pictorial, of the wide and practical application of caterpillar tractors and related equipment in the production of oil. Trailbuilders, bulldozers and scrapers are shown building roads, clearing drilling sites performing well servicing jobs and pipeline and refinery work. Form A-273-683 available on request.

LA PLANTE-CHOATE MFG. CO., Dept. CEP, Cedar Rapids, Iowa.

When inquiring specify CEP5084 — see information request blank, pgs. 2-3

Floodlight Focuses On Close Work

Delivers strong flood of light in medium beam; reflector is sealed inside, cannot tarnish or become dull

Uses—For general lighting purposes and for localized lighting to supplement general illumination.

Features—Detachable swivel socket focuses the light exactly where needed. Lining of pure silver is sealed inside the bulb to form a reflecting surface that cannot be dulled or tarnished by dust or fumes. The lamp delivers a concentrated flood of light in a medium beam that is especially effective in applications requiring intense illumination for exacting work.

Description—Named the "Birdseye Floodlite," the unit is an incandescent filament bulb, silver lined. Made in the "RE" short bulb, in four sizes and four separate voltages, from 100 to 300 watts and 110 to 125 volts.

WABASH APPLIANCE CORP., Dept. CEP, 335 Carroll St., Brooklyn, N. Y.

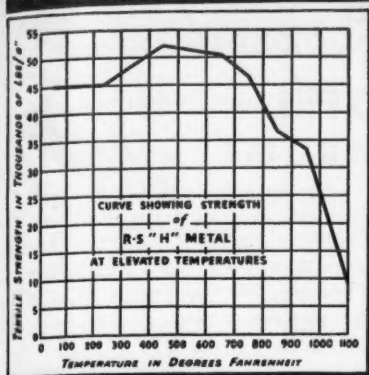
When inquiring specify CEP5085 — see information request blank, pgs. 2-3



FLOODLIGHT . . . detachable swivel focusing socket

CHEMICAL EQUIPMENT PREVIEW

A SUBSTITUTE FOR STEEL!



Used in
**R-S
BUTTERFLY
VALVES**



R-S Engineers have developed special metals for resistance against heat, abrasion and corrosion. For example, R-S "H" Metal is an alloy semi-steel that machines like cast iron. Tensile up to 50,000 p.s.i. Withstands high pressures and penetration of steam and gasses up to 1000° F. Stress relieved at 1200° F. **Costs much less than steel.**

Remember that R-S Butterfly Valves are precision machined and wedge-tight for the **simplified control and shutoff** of air, gas, steam, water, chemicals and semi-solids. Streamlined for self-cleaning. Extremely easy to operate. Write R-S Products Corporation, 4531 Germantown Ave., Philadelphia, Pa.



When inquiring specify CEP5086 — see information request blank, pgs. 2-3



Take the Load
OFF YOUR MIND

PUSH-E-Z has a reputation throughout Industry for taking overloads without a squawk or a squeak. During the Depression many Push-E-Z's had to do the work of two or three ordinary floor trucks. Under pressure today they can do the same and **MULTIPLY** your equipment. Welded channel steel chassis, choice of platforms, several types of floor protective wheels, frictionless Service Caster running gear, rated capacities to 6,000 lbs. — these are some of the specifications. Get complete data.

SERVICE CASTER & TRUCK CO.,
790 N. Brownwood Ave., Albion, Mich. Eastern Factory: 430-32
Somerville Ave., Somerville (Boston), Mass. Toronto, Canada: United
Steel Corporation, Ltd., SC&T Co. Division.

SERVICE
Mobilizers of Industry

When inquiring specify CEP5087 — see information request blank, pgs. 2-3

PRODUCTION

Duplex Chemical Pump Features "Plexiglas" Step-Valve

Unaffected by acids, mineral and animal oil; non-clogging, self cleaning; air binding eliminated



PUMP HAS "PLEXIGLAS"
VALVES . . . removable cover plates

Uses — For handling alum solutions, hypochlorites, weak acids, mineral and animal oils and many other liquids.

Features — "Plexiglas" valve is unaffected by most inorganic solutions and by alkalis and oxidizing

acids only in high concentrations. Ground glass ball checks.

Description—Step-valve and inlet and discharge connections are made entirely of transparent plastic. Single piece cover plates for this plastic valve are readily removable without disturbing connections; is non-clogging, self-cleaning and eliminates possibility of air binding. Transparency of the plastic makes it possible to watch pump action and detect discoloration of liquid. Pump is of typical step-valve design with double-ball ground glass checks and adjustable stroke for control of volume from one quart per hour up to maximum capacity. Duplex models handle up to 100 GPH Simplex models up to 50 GPH. Against pressure as high as 150 lbs. per sq. in.

MILTON ROY PUMPS, Dept. CEP, 1300 E. Mermaid Ave., Philadelphia, Pa.

When inquiring specify CEP5088 — see information request blank, pgs. 2-3

Plexiglas Knife Sheath

Lighter than aluminum holder which it replaces; strong, sanitary



PLEXIGLAS SHEATH . . .
attractive, useful

Uses — An aluminum knife sheath which fastens to a belt has had wide use among packing house workers because of its light weight and general utility. Restrictions on this metal made substitution necessary. Plexiglas afforded a most practical solution.

Features — The strength, transparency and light weight of Plexiglas has already prompted its adoption for observation and turret section

in war planes. These same qualities make it unusually serviceable in this limited but efficient application. The material is lighter than aluminum.

Description — Made from scrap pieces of aircraft Plexiglas. Moulded to duplicate the aluminum sheath in dimensions and design.

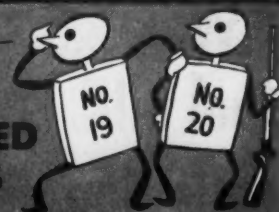
HOUSE OF PLASTICS, Dept. CEP, Cleveland, Ohio.

When inquiring specify CEP5089 — see information request blank, pgs. 2-3

SITUATIONS WANTED

2

**EXPERIENCED
WORKERS**



Ready to Start Work!

D.O. JAMES



Catalog No. 19

Catalog No. 20

Just say on your letterhead

"SEND 19 AND 20 QUICK!"

CATALOG No. 19 . . . containing 48 pages of complete engineering data, examples of use and prices of the D.O. JAMES Parallel Shaft Continuous-tooth Herringbone Gear Speed Reducers

CATALOG No. 20 . . . covering complete information on the D.O. JAMES Worm, Motorized Worm, Helical Worm and Double Worm Gear Speed Reducers.

D. O. JAMES

MANUFACTURING COMPANY

1120 W. MONROE STREET, CHICAGO

OVER 50 YEARS MAKERS OF EVERY TYPE OF GEAR AND GEAR REDUCER

When inquiring specify CEP5090 — see information request blank, pgs. 2-3

Will fuel oil rationing hit you?

● With heavy fuel oils badly needed to produce important materials for our armed forces, Deputy Petroleum Co-ordinator, Ralph K. Davis is reported as saying "Consumers should convert to coal or other fuels as quickly as possible."

If you are burning fuel oil now, wisdom suggests investigating conversion of your power plant to coal. In that connection, think of Gifford-Wood — designers and builders of modern coal and ash handling systems engineered to fit the job.

Idea book 200-C is full of ideas that may be useful to you. Write for a copy.

GIFFORD-WOOD CO.

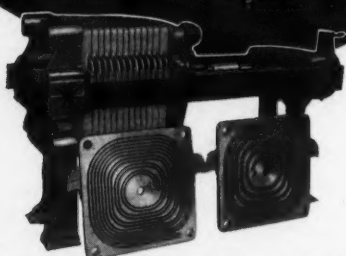
HUDSON, N. Y.

420 Lexington Ave., New York 565 W. Washington St., Chicago

When inquiring specify CEP5091 — see information request blank, pgs. 2-3



Continuous THICKENING Speeds Processing Cuts Costs



**THICKENING
WASHING
EXTRACTING
IN LESS
TIME AND
SPACE**

The design of the Shriver Thickener eliminates dependence on settling rate as a factor in thickening. It is simple, low in cost, fast working, compact and convenient to tie into subsequent processes. It makes possible not only thickening but also washing, extracting or catalytic reactions in a manner which eliminates much of the time and equipment required by other methods. Ask for Bulletin 115. T. Shriver & Company, 846 Hamilton St., Harrison, N. J.

SHRIVER Continuous THICKENER

When inquiring specify CEP5092 — see information request blank, pgs. 2-3

PRODUCTION

Cylindrical Filter Gives Dust Collector Greater Capacity

Collects dust from large production areas where grinding and similar operations are performed

Uses — This self-contained dust collector, now furnished with a new cylindrical type filter collects dust from large tool, surface and similar production grinding operations.

Features — This filter may easily be installed in dust collector units of this model already in use. Cylindrical type has over five times the area of standard flat filter but necessitates no increase in floor space.

Description — Dust laden air drawn in through the intake from the grinder enters the cylindrical filter through base plate. The filter, made of a $\frac{3}{4}$ " thickness of spun glass filter material is held between an inner and outer shell of heavy gauge expanded metal. A single rod holds the cap and base plate tightly against the open ends of the shells to seal them. Dust drops into the collecting pan and cleaned air is passed back into the room. Filter material is easily and inexpensively renewed by removing cap and base plates and opening outer shell.



SPUN GLASS FILTER MATERIAL, easily replaced.

AGENT—DETROIT MFG. CO., Dept. CEP, Book Tower, Detroit, Mich.

When inquiring specify CEP5093 — see information request blank, pgs. 2-3

Aprons Impervious To Variety Of Cutting Oils, Solvents

Strength, flexibility and light weight in transparent and heavy duty types



APRON & GLOVES . . . impervious to cutting oils and solvents

made of strong pretreated fabric, heavily coated with a special material which retains the flexibility of the fabric base but renders it impervious to the chemicals and solvents

Uses — For workers exposed to oils and organic solvents, including insoluble sulphur base cutting oils.

Features — Light weight and flexibility at no sacrifice of protection, strength and durability.

Description — Aprons (and gloves) are

What's a good HOTEL IN DETROIT?



We're glad you asked . . . because there's more than one good hotel in this city. We could name six or eight outstanding hotels offering fine accommodations at comparable rates.

Well then, what hotel should you stop at in Detroit? We say you'll like any of our leading hotels . . . but we ask that you give us a try.

We think we have a little extra to offer. It's difficult to describe this "little extra" but perhaps our long standing slogan can say it for us —

Glow with Friendliness
HOTEL FORT SHELBY
DETROIT
J. E. Frawley, General Manager

When inquiring specify CEP5094 — see information request blank, pgs. 2-3



Relieve the Most Critical Shortage of all . . .

Multiply Manpower! "One new Elwell-Parker Truck, added to our present Elwell-Parker fleet, has enabled us to complete a big Process Job ahead of time"

"—after we had rejected gondola cars because they were too roundabout, and after we had rejected manual trucking because we wouldn't have had enough floor space even for men to stand, let alone work."

Multiply your Manpower too! One Elwell-Parker and one operator can transport bigger loads faster and more safely than many hand laborers can.

And Elwell-Parker will release men already trained in your Warehouse or Plant, for useful jobs now going begging in your other Departments.

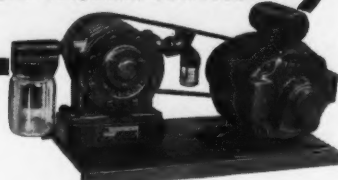
The Elwell-Parker Electric Co., 4239 St. Clair Ave., Cleveland, O.

ELWELL-PARKER Power Industrial Truck

When inquiring specify CEP5095 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

Specify THE New V-BELT DRIVEN Gast Rotary Air Pump FOR MEDIUM VACUUM SERVICE



★ Some of the advantages offered you by this new combination of Gast Rotary design and V-Belt Drive include—slow speed, quiet operation—long life—ease of installation regardless of shaft height or diameter—and low power required in proportion to air volume delivered. Already, this newest Gast Pump has found wide application. For automatic laboratory or plant processes, under vacuum or low pressure; for liquid transferring or filling, etc., use Gast Air Pumps—the pumps leading manufacturers furnish as standard equipment on their machines.

Model 15F50 in three sizes.

COMPLETE LINE INCLUDES: 12 sizes, Gast Rotary Air Pumps, ¼ to 23 c. f. m. Pressures up to 30 lbs. Vacuum to 28".

Direct-connected models Gast Rotary Air Pumps and Compressors in 12 sizes from ¼ to 23 c.f.m. Pressures to 30 lbs. Vacuum to 28".

SEND FOR YOUR **FREE COPY**
NEW AIR PUMP CATALOG



Victory Production

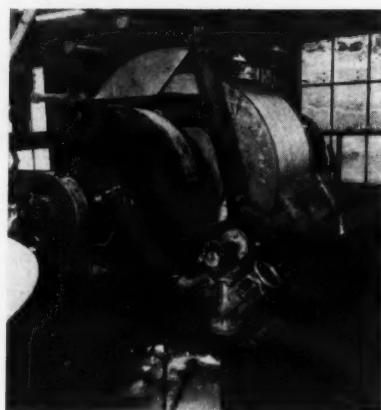
**GAST
ROTARY AIR
PUMPS**

Contains full descriptions, engineering data, performance tables, and many photographs of interesting actual applications of the complete line of Gast Rotary Air Pumps and Compressors including the new V-Belt Drive. Write for your copy.

GAST MFG. CORP.
101 Hinkley Street
Benton Harbor, Mich.

When inquiring specify CEP5096 — see information request blank, pgs. 2-3

Cast Lead FILTERS for ACID Solutions



Rotary Drum Vacuum Type

The Swenson Cast Lead Filter is effecting substantial economies in the filtration of Glauber's salt, copperas, zinc sulphate, copper sulphate, and other crystalline materials from acid solutions. Swenson cast lead construction is virtually corrosion proof. Service records testify to long life with low maintenance and operating cost. Swenson Evaporator Co. (Div. of Whiting Corp.), 15667 Lathrop Ave., Harvey, Illinois.

SWENSON

EVAPORATORS • FILTERS • CRYSTALLIZERS

PRODUCTION

encountered in a variety of industrial operations. Protection is provided against such solvents as carbon tetrachloride, trichlorethylene, perchlorethylene, benzol, ether, chloroform, ethylene dichloride, paint and lacquer thinners, animal, vegetable and mineral oils and carbon disulphide. Transparent type furnished in size 22½" by 33". Heavy duty style, 33" by 42".

RESISTOFLEX CORP., Dept. CEP, Belleville, N. J.

When inquiring specify CEP5097 — see information request blank, pgs. 2-3

Cyclone Dust Collector

Complete information about this cyclone type dust collector is provided in large size, spiral bound catalog. Profusely illustrated, all the mechanical features and specifications are presented to emphasize the advantages of the long cone, cyclone design embodied in this equipment. Engineering manual section includes practical data for efficient operation of dust controlled systems, technical layouts, charts and tables particularly useful in planning applications of dust control units. Catalog No. 82 is available on request.

AMERICAN FOUNDRY EQUIPMENT CO., Dept. CEP, Mishawaka, Ind.

When inquiring specify CEP5098 — see information request blank, pgs. 2-3

Automatic Chemical Sprinkler For Extra Hazardous Spots

Uses — There are many extremely hazardous points such as boiler rooms, furnaces, store rooms and stairways where special, highly effective protection, such as a chemical extinguisher is desirable. This chemical sprinkler has been designed for just such application. Larger units employing similar equipment are made for entire plants remote from water mains.



CHEMICAL SPRINKLER UNIT easily adapted to specific requirements

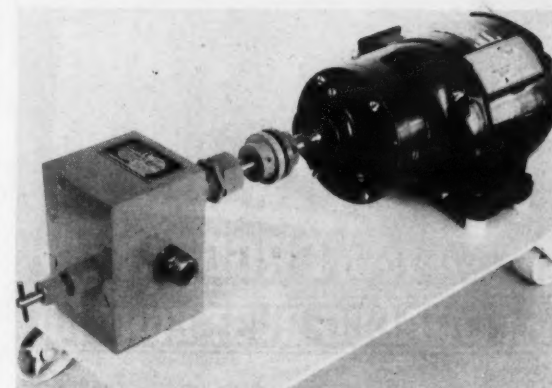
Features — Sprinkler chemical gives more effective performance than water and is said to be capable of extinguishing magnesium fires. Fluid used does not freeze, rust or deteriorate and is harmless to clothing, furniture, fixtures.

Description — Principle involved is similar to standard water sprinkler systems, except that an extinguishing fluid, instead of water is used. By means of a pressure switch controlling the electric motor the air compressor maintains a constant pressure on the extinguishing liquid in the tank and pipe line. Heat from fire will melt the fuse-link causing the sprinkler head to open. The liquid is then sprayed under pressure onto the fire. The resulting vapor blanket consumes the heat, displaces air and stops combustion.

BANCROFT CHEMICAL SPRINKLER CO., Dept. CEP, 82 Foster St., Worcester, Mass.

When inquiring specify CEP5099 — see information request blank, pgs. 2-3

ERTEL presents the VICTORY PUMP



A plastic pump to meet your acid handling requirements

This pump has been designed to handle a wide variety of corrosive chemical solutions, both acid and alkaline. The Model "G" Pump is positive in action and its simplicity of design requires a minimum of attention. It is constructed from dimensionally stable plastic material with stainless steel shafts. The unit is equipped with direct coupled electric motor with a built in reduction unit, to insure uniform operating performance. This pump is applicable to laboratory and transfer work as well as pressure filtration pumping. The Model "G" pump is obtainable in ¼ to 50 Gallon per minute capacities.

Write for catalogue and particulars.

ERTEL ENGINEERING CORP.

Manufacturers of Liquid Handling Equipment
KINGSTON, NEW YORK
New York Sales Office & Showroom . . . 40 W. 48th St.

When inquiring specify CEP5100 — see information request blank, pgs. 2-3

LUBRICATION Sealed In . . . FOR Minimum Maintenance



Bearing is Self-Aligning Without Distortion of Seal

A standard size and type of mounting for practically every application . . . misalignment of shaft will not impair effectiveness of seal . . . retains lubricant over long periods, therefore requires minimum maintenance. Replace ordinary bearings with SEALMASTERS.

Get Data Book 840—complete Engineering data and dimensions.

SEALMASTER
Ball Bearing
Units
Pillow Blocks
Flange Units
Take-Up
Cartridge Units
Extended Inner
Ring Bearings
Hanger Bearings
Carrier Bearings

STEPHENS-ADAMSON MFG. CO.

Tellevel—Bin Level Controls Car Loaders SealMaster Ball Bearings Car Pullers Winches ChangeMaster Variable Speed Reducers Saco Speed Reducers

11 RIDGEWAY AVE., AURORA, ILL.

When inquiring specify CEP5101 — see information request blank, pgs. 2-3

DUST



Slows up **PRODUCTION**

USE DRACCO DUST CONTROL

DUST, even in small quantities, slows up production because it reduces the efficiency of the entire plant. It doesn't pay to tolerate Dust when it can be controlled in ANY quantity with DRACCO Dust Control. We recommend DRACCO Unit Filters for Dust from individual machines or operations. DRACCO Engineers with over 25 years experience are especially qualified to recommend the proper equipment to meet your particular needs.

Write for Bulletin No. 302

DRACCO CORPORATION

Successors to The Dust Recovering & Conveying Co.

4060 East 116th Street, Cleveland, Ohio New York Office: 130 West 42nd Street

PNEUMATIC CONVEYORS • DUST COLLECTORS

When inquiring specify CEP5102 — see information request blank, pgs. 2-3

Today for **V**ICTORY Tomorrow for ECONOMY

Today every ton of IngAcIad Stainless-Clad Steel that is rolled is a two-way contribution to Victory.

First—By providing perfect stainless service, it speeds up production in the Chemical, Food, Textile, Dairy and other essential industries.

Second—By greatly reducing the quantity of vital alloys required to give stainless service, it releases more of these precious metals for other direct war uses.

So today IngAcIad is a promise of Victory. Tomorrow, when Peace comes, it will again offer you the promise of those many economies which its pre-war use had already demonstrated to American Industries.

IngAcIad is rolled in Sheets 8 to 18 gauge, and in Plates 3/16" and heavier. Regularly supplied clad with 18-8 stainless, but also available in other analyses.

We also produce solid corrosion and heat-resisting alloys

INGERSOLL STEEL & DISC DIVISION
BORG-WARNER CORPORATION
310 South Michigan Avenue, Chicago, Illinois
Plants: Chicago, Ill.; New Castle, Ind.; Kalamazoo, Mich.

"A Borg-Warner Product" **INGACIAD**
STAINLESS-CLAD STEEL

When inquiring specify CEP5103 — see information request blank, pgs. 2-3

• • • IDEAS • • •



SYNTHETIC RUBBER THREAD, made from Ameripol

Perfect Synthetic Rubber Thread

*Superior in many respects to natural product;
available only for war production*

Again synthetic rubber finds a new application, this time in what is believed to be the first synthetic rubber thread ever developed in this country. This development, through a most intensive research program, has been primarily for military purposes to conserve the natural rubber thread that formerly went into products for our armed forces. There is no present possibility that any of the thread can be diverted to the manufacture of civilian products or any indication when it will be available for such purposes. Some of the potential uses are in harness for parachutes, gas masks and respirators. It is now planned to make this thread available to textile manufacturers for military purposes either in the "naked" or uncovered form or covered with yarn. "Naked" rubber thread is later covered with yarn in the textile mills. Tests on the synthetic product show 700 % elongation, comparable to the natural type. Its comeback is comparatively the same, while its physical properties under accelerated aging are better stabilized. The thread resists the effects of dyeing or bleaching more than natural rubber as well as body oils carried in perspiration. It is non-toxic. It has a much greater resistance to chafing or cutting by the needles of the knitting machines. Made only in black. Civilian use of the natural product has been in tops of men's hose to serve as a garter, in girdles and foundation garments. Ameripol, synthetic rubber from which this thread is made is the product of B. F. Goodrich Co., Akron, Ohio.

Money For Your Old Paint Brushes Offered By Big Salvage Campaign

Cash payment of 10c to \$2 per brush; bristles to be re-processed to ease serious shortage

In line with the Government's conservation efforts, a nationwide campaign for the collection and reclamation of old or used paint brushes is announced by E. S. Phillips, president of Devoe & Reynolds Co., Inc. Approximately 10,000 representatives and dealers all over the country will serve as collection agents contacting and enlisting the cooperation of 60,000 contracting painters, 10,000 paint distributors, 24,000 industrial plants and 1,500 ship building and marine supply companies. School children and house-



NEW PAINT BRUSHES FOR INDUSTRY . . . to be made from old ones collected by dealers

holders will also help. The program carries a cash incentive whereby anyone turning in old brushes to an authorized representative will receive from 10c up to \$2 per brush depending upon the length and width of the bristles. The old bristles will be put through a reclamation process and used to make more paint brushes, relieving the scarcity due to cessation of imports from the Far East. The importance of the project is reflected in the tremendous need for paint brushes in war industries. Floor sweeping brushes, too, are essential. The efficient reclamation of bristles will be a major factor in the continued full time employment of painters, mechanics, artisans and those directly employed in the paint and brush industries. Large users (those with 100 pounds or more) are urged to ship old brushes to "Superklean Brush Reclamation Plant," 1481 So. Eleventh St., Louisville, Ky. Prompt payment will be made upon receipt. This offer of payment is good until September 1, 1942.

Electronic Devices Detect Tiny Pin Holes in Tin-Covered Steel

Flaws detected and marked to be cut-out; sheets automatically dropped from production line

Tin-covered sheet steel used for canning food is now being inspected by electronic devices to detect tiny pin holes. Sheet steel races from the processing machines at speeds up to 1,000 feet per minute, too fast for human eyes to check for minute defects but not too fast for two electronic devices. The first of these detects holes as small as one hundredth of an inch in diameter. The second "remembers" exactly where each tiny hole was and marks it to be cut from the sheet before it becomes a can. This precaution prevents leakage and spoilage. One of the first installations of electronic equipment of this type was made in a Maryland steel mill several years ago. This application is now widely used in the steel field. In one plant, 36" wide steel strip comes off the uncoiler and passes through the trimmer at speeds as high as 900 ft. per minute. Just before the strip enters the leveller rolls it passes through a slotted scanner head. Light projected downward from bulbs in the upper segment of the head, above the slot, passes through the pin holes if they are present and operates photoelectric tubes in the bottom half of the head. In turn these tubes through an amplifier, operate a diverting mechanism which causes the faulty sections to be dropped out of the production line. After passing the head, the

strip continues through the leveller rolls and the shear before arriving at the diverter. Since the speed of the process is not constant, an ingenious, self-adjusting timing device is used to assure the diversion of the faulty sheets, which are not dropped out until they have progressed through the levelling and shearing operations, a distance of perhaps 10 feet. General Electric Co., Schenectady, N. Y., developed the idea.

Electrolytic Plating Process Saves Tin, Time and Power

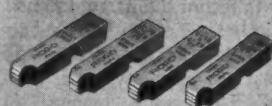
A more economical electrolytic process for plating strip steel with tin employs a neutral solution which is said to eliminate sludging and the consequent waste of tin common to many electroplating methods. It is said that strip steel for containers can be tin-plated twice as fast with less electric power by this process as by the "alkaline" electroplating method. Also, a thinner more uniform coat of tin can be applied electrolytically than by the conventional "hot dip" method, resulting in savings of from 40 to 65 percent of tin used. The thinner coatings permitted by his method will enable producers to make the best possible use of necessarily limited tin allotments. Tin deposited by this system known as the Halogen process can, it is said, be heated without discoloration to obtain a bright finish or in the process of applying lacquers or enamels. This process is a development of E. I. du Pont de Nemours & Co., Electroplating Div., Wilmington, Del.

Fence Has "Ears" to Guard Plant

Acoustic fence apparatus has effect of multiplying guards in darkness and bad weather

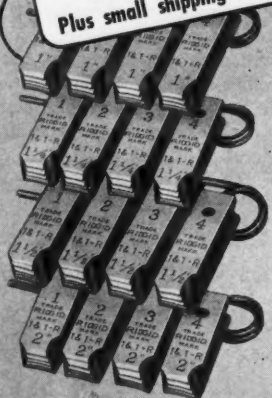
"Hearing" even the whisper of a person, the snip of a wire cutter or the sound of a pick, tiny robot sentries, many times more efficient than men in storm, fog and darkness, are now aiding human guards along the miles of high wire fences that enclose some of the country's greatest war production plants. Six months of tests under every conceivable condition have proved the new sentry system to be the most efficient yet devised. Actually, the fence itself serves as the "ears" of the system, relaying suspicious sounds instantly to the human watchman at his post or to a central guard station inside the plant, and telling instantly the location of any disturbance. In addition to extending the hearing range of guards, the robots provide an ever-ready checking in system. A watchman need only to step up to the fence, report in an established code by tapping. "Guard at Zone 3, Division L, everything O. K.," and he will be plainly heard at headquarters. He can also use the "fence-line telephone" in a similar manner to call for help. The manner of receiving warning alarms or guards' calls can be as simple or elaborate as desired. They can be heard through a loud speaker or can be made to record themselves silently on a moving tape or drum, showing the exact hour, minute and second received. The signals may also be arranged to ring a bell, or may be automatically relayed to a police or military headquarters. This invention can be applied with equal readiness to any establishment enclosed within a wire fence — army depots, internment camps, power houses, outdoor substations, industrial plants or warehouses. Invented by a Du Pont engineer, the system is being manufactured for general use by Automatic Alarms, Inc., of Youngstown, Ohio. Its cost is such that even small factories may install it.

A New Service to keep your **RIGID** Pipe Tools on the job



Dies for RIGID No. 65R Series

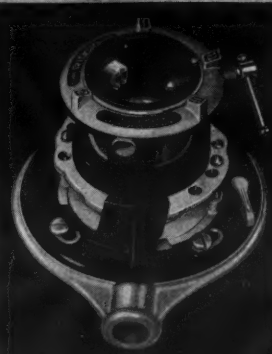
Your RIGID dies
Factory Reconditioned
44¢ PER SET
OF 4
Plus small shipping charge



Dies for RIGID No. 11R Series



Dies for
RIGID
No. 00R, 01R,
11R and 3-way
Series



FACTORY RECONDITIONING of RIGID Wrench Jaws and Chaser Dies

Big Saving To You, New Parts Guarantee

No Priorities Needed

This Service Available Only in U. S.

Here's What You Get

- 1 Careful inspection of the parts you send us, to make sure they are worth reconditioning. We reserve the right to reject them for service if they can't be made as good as new.
- 2 Wrench jaws to be scientifically annealed in our automatic electric furnaces, same as new jaws.
- 3 Wrench jaws to be recut in the same machines and by exactly the same methods as used for new jaws. Chaser dies are accurately re-ground to original specifications.
- 4 Wrench jaws are then rehardened, like new.
- 5 Both wrench jaws and chaser dies are given final inspection—and returned to you under regular RIGID new part guarantee of satisfaction.

Here's What You Do

Collect all your old worn RIGID Wrench Jaws and Chaser Dies and turn them over to your Supply House with order for this Reconditioning Service. Your Jobber ships them to us with parts accumulated from other customers, to save shipping expense, for we allow one-way freight to Jobber on lots weighing 100 pounds or more. Remember: *only RIGID trademarked parts accepted for service.* No priorities needed. Service is prompt. Keep your RIGID Tools on the job — order today.

THE RIDGE TOOL CO. ELYRIA, OHIO

RIGID

Pipe Wrenches, Cutters, Threaders, Vises

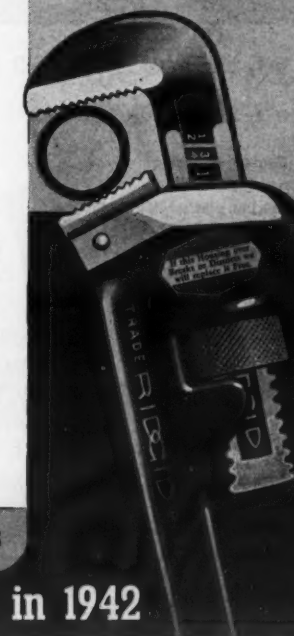
Work-Saver Tools for America's Big Job in 1942



RIGID
Wrench
Hookjaw



RIGID
Wrench Heeljaw with pin



—When inquiring specify CEP5104 . . . see information request blank, pgs. 2-3—

SPEED WAR JOBS in the office, too!



... With Fluorescent
by the
Wakefield GRENADIER

Don't let a back-log of paper work in the office hold up your production line. You can help speed today's important office jobs faster with Fluorescent by Wakefield Grenadiers! They give good light for faster, more accurate seeing; help people feel better, work better. You can be sure of dependable, trouble-free operation; for Grenadiers are Certified Fleur-o-liers, tested and certified by impartial Electrical Testing Laboratories. Maintenance cost is low; cleaning and relamping is easy. Write for details.

THE WAKEFIELD BRASS
F. W. CO.

72 CHEMICAL PARK

VERMILION, OHIO

When inquiring specify CEP5105 — see information request blank, pgs. 2-3

**Farval Pioneered
Centralized Lubrication**
sixteen years ago!

Only the Farval Valve has all these vital features:—

It contains no springs

Has but two moving parts

Contains no check valves

Is individually adjustable

Contains no small ports

Will distribute
either oil or grease

Measures by
piston displacement

With a telltale indicator
at every bearing



No other lubricating system can give you all these features. No modern Centralized System is complete without all of them. Why compromise the lubrication of your machines? Install Farval! The Farval Corporation, 3257 E. 80th St., Cleveland, O.

Affiliate of The Cleveland Worm & Gear Company, Manufacturers of
Automotive and Industrial Worm Gearing.

In Canada: PEACOCK BROTHERS LIMITED

FARVAL CENTRALIZED
SYSTEMS OF
LUBRICATION

When inquiring specify CEP5106 — see information request blank, pgs. 2-3

• • • IDEAS • • •

National Rare Chemical Registry Will be Boon to Research

*Armour Research Foundation Project already
contacting over 2,000 laboratories*

A National Registry of Rare Chemicals has been organized by the Armour Research Foundation, affiliated with the Illinois Institute of Technology to record the name, location and amount available of chemicals too rare to be listed by regular chemical supply houses. No other complete listing of uncommon chemicals exists nor has any ever been attempted on a complete basis. Uncommon chemicals in laboratories, schools and industrial plants, now generally unknown, can be made available for research and save time in discovering a source of such materials. The file will not be open to general inspection but specific inquiries will be answered. Requests for data have been made of approximately 2,000 industrial and educational laboratories. The Registry requests that all laboratories, industrial organizations or individuals not contacted voluntarily submit information of this nature. If the owner of the chemical wishes to remain anonymous to prevent disclosure of commercial secrets, the Registry will act as intermediary. It does not buy or sell chemicals but merely maintains data files. No charge will be made for the Registry's services. Inquiries should be directed to the Registry at the Armour Research Foundation, 3300 Federal St., Chicago, Ill.

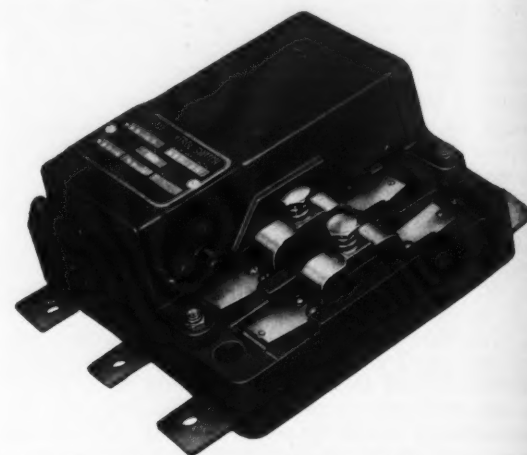
New Coating Blacks Out Windows And Renders Them Shatter-Proof

*Easily applied, lasts a year, yet can be washed
off with water and cloth*

American chemists have just developed a coating that both blacks-out windows and renders them shatter-proof. Opacity is retained for a year and glass splinters are held together even though the window may be broken into a thousand fragments. This coating, applied with a brush and easily washed off with water and a cloth, is known as Protex Shatter-Proof-Coating No. 4. A related product is an outside black-out coating sprayed or brushed on windows which is impervious to all weather conditions and will not cause windows to crack or split under the sun's rays, a difficulty frequently encountered. It dries in half an hour to a dense, flat black finish yet is easily removed with kerosene. This produce is known as Protex-Rowe No. 200 Black-out Coating. It as well as the item first mentioned are both available through Douglas Distributors, New York, N. Y.



BLACK-OUT COATING MAKES
GLASS SHATTER-PROOF... splinters
do not scatter under hammer blows



REMOTE CONTROL SWITCH... for blackout operations

Industrial Blackout Control

*Prompt operation and proper auxiliary lighting
provided by remote control switches*

The necessity for blackout control for large areas from a central control point has resulted in the adoption of various methods requiring particular equipment. Mechanically held remote control switches are utilized in numerous ways in such applications. They simplify design problems in control by dependable convenient switching and economical wiring. Feeders run directly to distribution centers located to provide short branch circuits. Remote control switches are used for the desired grouping of circuits. Control stations at desired points are connected by pilot wires and used to turn on or off any part of the lighting system. The controls for a limited area are usually grouped at one control point. Bulletins issued by the Automatic Switch Co., 41 East 11th St., New York, N. Y. describe a number of methods. The manufacturer's RC Remote Control Switch has particular application here. Two of the methods listed are the most practical for the majority of installations. The first utilizes control switches in areas where the maximum distance is limited to several thousand feet. Beyond this distance it is more economical to use control relays as embodied in the second system suggested. In this case the control distances are not limited by the operating current of the larger switches. The small current used by each relay permits the relay coils to be connected in multiple or cascade, depending on the wire size, length of run and the number of locations to be controlled. Both these methods are suitable for main switches on lighting panels. They are designed for easy installation, requiring only one line, load, and pilot wire connections at each location. For communication and essential lighting a second source of power should be available with automatic transfer switches. Such low intensity blackout lights can employ three-pole, 30 ampere contacts which turn on the blackout lights when the main lights are turned off. They are mounted on the RC switch and operated by the mechanism that operates the main contacts. Similar switches are available up to 1,000 amperes per pole for main contacts and 15, 30, or 60 ampere auxiliary contacts for "blackout" lighting. Both sets of contacts are operated by the same mechanism, making the unit double throw, providing either normal light or blackout light at all times. The RC

switch referred to here is of the single coil, magnetically operated, mechanically locked type. Position locking obtained without use of hooks or latches. Operates with surge of power to open and close contacts. Designed for mounting on panelboards and switchboards or for separate installation on sub-panels or enclosed in unventilated cabinets. Descriptive Bulletin 920, Section 2—C available upon request.

Low Temperature Insulating Board of Asphalt Enclosed Fiber Glass

Highly efficient in applications where cork, now scarce, has been specified

A new insulation board of compressed pure glass fibers inclosed in a sheath of asphalt provides a replacement for cork and performs equally well as that now scarce material in low-temperature and roof applications. Used successfully for a number of years as a medium and high temperature domestic and industrial insulating material its suitability for low-temperature service involved the problem of reducing moisture penetration to a minimum. Rigid tests indicate that this problem has been solved, so that it can be used as insulation in connection with the refrigeration, storage and transportation of foods and in the cold processing of industrial materials. In roof applications it saves fuel and air conditioning costs and prevents condensation on the underside of deck. The board is made of pure glass fibers, compressed to a density of 6 lbs. to the cu. ft., completely inclosed in a sheet of double asphalt that has a high melting point. Heat conductivity is 0.265 BTU per sq. ft., per degree F., per in. thickness at mean temperature of 60 degrees F. Low moisture penetration is demonstrated by the following tests. After being completely immersed in water at 78 degrees F. for 196 hours, the board showed a gain in weight of 90.5%. Similar tests on other low-temperature insulating materials showed gains in weight from 64% to 261%. When exposed in a humidity cabinet at 70 degrees F. and 65% relative humidity, moisture pick-up from previously dry conditions was 0.064 by weight. This "Fibreglas AE Board," as it is called, is made in the "American Standard" size for refrigeration insulation, 12" by 36" and in thicknesses of 1", 1½" and 2". Blocks are formed with true square edges and corners and the asphalt coating is thoroughly sanded to prevent adhesion during shipment or storage. The asphalt coating provides a substantial seal completely around the fiberglass insulation. It also increases the rigidity of the board so that blocks can be used for the erection of self-supporting partitions or as load bearing insulation to carry floors in refrigerated spaces. The insulation has high resiliency showing almost complete recovery in five minutes after loading to 1728 lbs. per sq. ft. The board is immune to rot, decay and fungus growth, provides no sustenance for insects or vermin and is a barrier to rodents. It is regarded as a fire retardant. The material can be sawed with an ordinary wood saw, if the blade is lubricated frequently with kerosene. For curved surfaces of large radii, the board can be slotted on one face and bent to fit the required curve. Its light weight makes it easy to apply to areas of irregular shape. The board is the product of Owens-Corning-Fiberglas Corp., Toledo, Ohio.

Turn to pages 2-3. Request slip sent to publisher will bring you more information about products described in this issue.

Cyclone and Hydraulic Dust Collectors

Dust collecting methods and equipment provide the subject matter for detailed and illustrated discussion in a four-page, two-color folder. The principle of the expanding nozzle entrance featured in this equipment is given particular attention, explaining how it directs air flow without use of vanes and its application to a wide range of materials. In addition to this cyclone type collector, a hydraulic or wet type collector for use where dust is mixed with smoke or fumes and cloth bag air filters in unit and portable models are also described. Photos, specification tables and schematic illustrations provides additional data of practical value. Bulletin No.

NORTHERN BLOWER CO., Dept. CEP, 6500 Barberton Ave., Cleveland, Ohio.

When inquiring specify CEP5107 — see information request blank, pgs. 2-3

Sheet Metal Parts & Assemblies

Information that should be of definite interest to manufacturers who must sub-contract sheet metal parts and assemblies is presented in a catalog "Data on Production Facilities". The catalog features illustrations and detailed specifications of sheet metal parts and assemblies fabricated under contract for various industries. Machines comprising the equipment used in this service are listed. Catalog available on request.

KIRK & BLUM MFG. CO., Dept. CEP, 2833 Spring Grove Ave., Cincinnati, Ohio.

When inquiring specify CEP5108 — see information request blank, pgs. 2-3



"This is going to make a
**TOUGH
JOB
EASIER!"**

TODAY, in many wartime plants, FLEUR-O-LIERS—certified fluorescent lighting fixtures—are speeding production, saving time, guarding

against fatigue and eyestrain. FLEUR-O-LIERS give you such important features as: Certified ballasts and starters, durability and safety, maximum light output, ease of maintenance, correct ventilation. Made by 40 leading fixture manufacturers in different types, sizes and designs.

FLEUR-O-LIERS must now be bought under the necessary WPB priority rating. Ask your electrical contractor, wholesaler or electric service company.

Get free FLEUR-O-LIER booklet and list of manufacturers. Write FLEUR-O-LIER Manufacturers, 2154-7 Keith Building, Cleveland, Ohio.

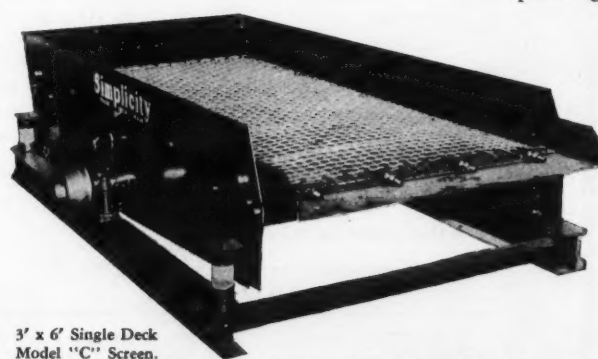
FLEUR-O-LIERS

CERTIFIED FIXTURES FOR FLUORESCENT LIGHTING

Participation in the FLEUR-O-LIER MANUFACTURERS' program is open to any manufacturer who complies with FLEUR-O-LIER requirements

When inquiring specify CEP5109 — see information request blank, pgs. 2-3

Simplicity Gyrating Screens



3' x 6' Single Deck
Model "C" Screen.

have been built and used since 1922 and today are operating in over 1400 different plants through out the country. Simplicity screens are used for every type of operation requiring a separation into sizes, reclamation of products or dewatering of liquid pulps.

Simplicity screens are used to recover good wood fibre from the waste white water in paper mills; screen starch solutions through 200 mesh cloth; dewater finely ground rubber; size and also pack every kind of food cereal, and make fine

mesh separations in different chemical plant operations.

Have a Simplicity Engineer Check Your Requirements

SIMPLICITY ENGINEERING COMPANY
DURAND, MICHIGAN

For Canada: Watrous Limited, Brantford, Ontario

When inquiring specify CEP5110 . . . see information request blank, pgs. 2-3

There's More Than Savings For You...

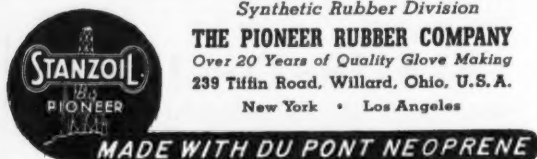


In Protecting Busy Hands with Stanzoil Neoprene Gloves

It isn't merely that Stanzoils save you disability claims by protecting your men and women workers' hands from injury by oils, greases, caustics, acids and solvents . . . nor that you save because Stanzoils often last 3 to 7 times as long as rubber gloves (if you can get them!).

The big value these amazing neoprene Stanzoils give you, as many chemical plants are proving these days, is in more production from hands that work in comfort and freedom, safe from chemical burns or infections.

Stanzoils of DuPont neoprene are not stiff and clumsy, do not retard nimble fingers, are comfortable to wear, give better protection. Made black and white, full ranges of sizes for men and women. Write for current information about deliveries.



Synthetic Rubber Division

THE PIONEER RUBBER COMPANY

Over 20 Years of Quality Glove Making

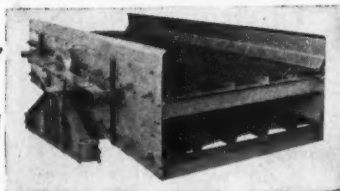
239 Tiffin Road, Willard, Ohio, U.S.A.

New York • Los Angeles

When inquiring specify CEP5111 — see information request blank, pgs. 2-3

"X-RAY" CATALOG on GYREX SCREENS

Send for Your
FREE
Copy Today!



The first few pages of ROBINS new X-Ray Bulletin No. 115 are printed on separate transparent sheets and show the various important parts of the well-known ROBINS-GYREX Vibrating Screen. Together these pages make up a complete screen; but taken separately they permit the reader to study each element of construction and design independently of the rest.

ROBINS CONVEYING BELT Company
PASSAIC, NEW JERSEY

Please send me a copy of X-Ray Bulletin No. 115 ROBINS-GYREX Vibrating Screens.

Name _____

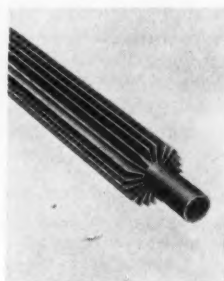
Address _____

When inquiring specify CEP5112 — see information request blank, pgs. 2-3

PRODUCTION

Strip Steel Fins Increase Heat Capacity of Transfer Tubes

Cut required footage of scarce tubing, saves space; in new equipment or as replacement



"FINTUBE" . . transfers more heat

Uses — To decrease the amount of plain bare tubing required in heat transfer applications and increase the efficiency of such installations.

Features — Fins made from strip steel, of which there is no scarcity. Smaller number of tubes or shorter tubes required for a given service resulting in less weight, less space, smaller shell, fewer fittings and easier maintenance.

Performance — One foot of "fintube" is said to do the work of several times that length of plain bare tubing. For example, one foot of "fintube" does work of 4 to 6 feet of plain bare tubes in steam to bunker C fuel oil heaters; of from 6 to 10 feet in water to gas coolers; of from 4 to 6 feet in quench oil coolers; and of from 2 to 7 feet of plain bare tubes in hydrocarbon condensers. Generally, they provide a secondary heat transfer surface 6 to 15 times that of bare tubes, permitting the primary and secondary surfaces to be proportioned to the heat transfer coefficients of the materials being processed.

Description — Fins made of strip steel are welded integral on the outside of bare tubing. Adaptable to the widest range of heat transfer requirements. Available in original equipment from most heat exchange builders and can be installed in existing shells with only minor changes to tube sheets or other small alterations. Specific requirements depending on the commodity, flow, temperature differential, pressure and other condition can easily be filled. "Fintubes" are available with any commercial size low carbon steel center tubes from 1/2 to 7 in. O. D. with from 1/2 to 1 1/2 in. low carbon fins and with 4 to 6 in. chrome steel fins. With 18-8 chrome nickel steel center tubes with 4 to 6 in. chrome or 18-8 stainless steel fins. Tubes can be lined with copper, zinc, lead or aluminum if desired when corrosive or other special commodities are

THE BROWN FINTUBE CO., Dept. CEP, 119 Filbert St., Elyria, Ohio.

to be handled within the tube.

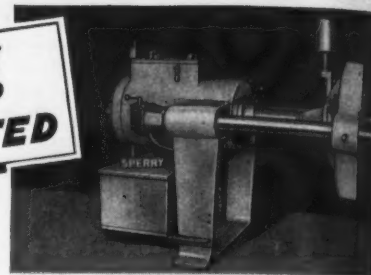
When inquiring specify CEP5113 — see information request blank, pgs. 2-3

WANTED: CHEMICAL MANUFACTURERS

One of the armed services is seeking chemical manufacturers for the manufacturing of sulfur trioxide solution in chlorosulfonic acid (FS) Spec. 96 — 31 — 52; titanium tetrachloride (FM) smoke, and chloracetyl chloride, an ingredient for the manufacturing of chloracetoxyphenone (CN).

Only manufacturers will be considered; packaging concerns will not be considered. Bonafide chemical manufacturers are requested to address their inquiries in writing (do not call in person or telephone) to Engineer X, Contract Distribution, War Production Board, 122 East 42nd Street, New York, N. Y.

**LESS
HELP
WANTED**



THE NEW

SPERRY Electric Hydraulic Closing Device

Here's increased efficiency plus greater economy. Once this device is installed you can divert labor to other operations—and it can be installed—easily and quickly on your present press.

But that isn't its only economy. Quicker opening and closing speeds up the filtering cycle. Wear and tear on filter cloths is greatly reduced. Operating hazards are minimized. And far less operator effort is required since the operation is controlled by adjustment at only two places.

The new Sperry Electric Hydraulic Closing Device can be applied to your present filter press without extensive alterations, and on Sperry Filter Presses only a substitution of the cross-head is necessary.

Write today for illustrated bulletin.

D. R. SPERRY & COMPANY

BATAVIA, ILLINOIS

Filtration Engineers for over 45 years.

Eastern Sales Representative

Henry E. Jacoby, M. E.

205 E. 42nd St., New York

Telephone: Murray Hill 4-3581

Western Representative

B. M. Pilhashy

Merchant's Exchange Bldg.

San Francisco, California

When inquiring specify CEP5114 — see information request blank, pgs. 2-3

MITCO

THE OPEN

STEEL

FLOORING

THAT'S 90%

OPEN

Typical Mitco installation in large central station.

With its rectangular openings . . . and freedom from bolts and rivets . . . Mitco Open Steel Flooring provides an open area of 90%, insuring maximum light and ventilation. Its square edge steel bars provide strong and safe walking surface. Each Mitco panel is a strong, integral unit over which concentrated loads are distributed without lateral deflection.

Write for complete data on Mitco Open Steel Flooring. Mitco "Shur-Site" Treads for stairs, ladders, etc., and Mitco Armorgrids for industrial floors, loading platforms, etc.

HENDRICK MANUFACTURING CO.

CARBONDALE, PENNA.

30 CHURCH ST., NEW YORK

Sales Offices In Principal Cities

Also manufacturers of perforated metals, perforated metal screens and decorative grilles; light and heavy steel plate construction.

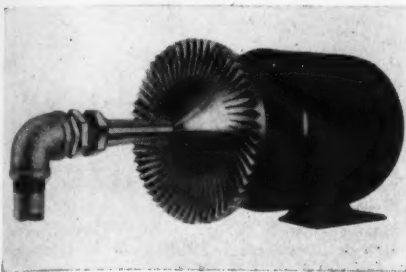
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EQUIPMENT FOR PRODUCTION

One Piece Machined Spray Wheel

For New or Replacement Use

For single or multiple installation in many industries; also used in gas washing



ONE-PIECE SPRAY WHEEL . . attached to splash proof totally enclosed motor

power plants for conditioning air to cool generators, milk drying, humidity generation in malt houses, breaking up chemicals and materials in manufacturing processes and in steel mills. For washing gases in blast furnace service and gas producing plants.

Features — Self-cleaning. Low water requirements together with large space covering capacity. One piece construction eliminates danger of electrolysis, present when

Uses — Designed for wide range of applications in washing of air or recovery of various kinds of by-products. For air washers in food factories,

dissimilar metals come in contact with each other and water.

Description — Spray wheel is made of metals or alloys to meet the respective chemical or corrosive conditions in a plant. It is totally machined. Spray generating medium is an integral part of the entire unit, no separate pins or parts to break. Delivery of wash water is through nozzle or by any other means that may be required. Cannot become clogged and delivers a steady, uniform spray, continuously covering the air passage. Use of heat resistant metals makes it suitable for high temperature cleansing or recovery. Changes in spray form and angle easily accomplished. May be installed singly or in multiples on new installations or as equipment to replace banks of spray nozzles previously used. Motor for direct connected units is of the splash-proof totally enclosed type. Descriptive folder is available.

D. J. MURRAY MFG. C., Dept. CEP, Wausau, Wis.

When inquiring specify CEP5117 — see information request blank, pgs. 2-3

Industrial Cleaning Machines, Cleaning and Rinsing Solutions

Folder features an industrial cleaning machine for precision cleaning of industrial instruments, meters, gauges, clocks, bearings, etc. Leaflet shows the various special cleaning solutions for these products. Available on request.

L & R MFG. CO., Dept. CEP, 54 Clinton St., Newark, N. Y.

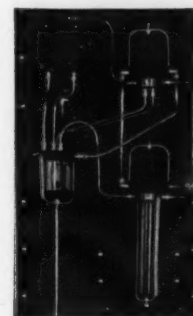
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CAMBRIDGE

AUTOMATIC and CONTINUOUS

GAS ANALYSERS

..For the Process Industries



Cambridge Recording Gas Analysers insure accuracy and trouble free performance to a degree hitherto unknown. Completely automatic. Eliminate human error. No chemicals. No intermittent sampling. No moving parts in Cambridge analysis units. Combination units enable the continuous recording of several components of a gas, simultaneously, on a single chart. The Recorder can be furnished with contacts for various control or alarm actuating circuits and may be located at considerable distance from any sampling point. Cambridge analysers are used for the determination of

- O₂, H₂, CO₂, etc.
- COMBUSTIBLE GASES
- SPECIAL APPLICATIONS

Make use of our wide experience as producers of gas analysers for exacting industries. Send details of your problem to obtain our recommendations.

CAMBRIDGE INSTRUMENT CO., Inc.

3732 Grand Central Terminal New York City

When inquiring specify CEP5119 — see information request blank, pgs. 2-3



TAPERED

Drainage Channels
To Give Extra
Capacity

STAGGERED
Drainage Manifolds
To Give Extra
Strength

The ever-increasing depth of the channels in the F-M FREEFLOW Filter Plate* takes care of the progressive inflow of filtrate through the cloth without backing it up. This means extra capacity over that of ordinary plates.

Staggered drainage manifolds mean that the section through the plate at that particular point has not been weakened by the borings. This means a longer lasting plate.

These two advantages alone should be worth investigating further. There are others. In writing for further information, tell us about your problem — in detail. F-M Filter Plates are made of several different kinds of wood and of Bakelite — in sizes to fit any standard press.

FILTER MEDIA CORP.

Irrington-on-Hudson, N. Y.
Chicago — Salt Lake City

T — EM — 3

Washing Type

*Patents Pending

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SARGENT

Slein Electrolytic Analyzer.
For rapid analysis of metallurgical products. Self contained — portable — economical. Literature on request.

Micro and semi-micro Centrifuges.
Safe — no external moving parts. Speeds 3300 to 4400 r.p.m. Complete precipitation in 30 to 120 seconds. Prices \$28.50 to \$34.00.

Heyrovsky Polarograph American Model XI.
Booklet describing the instrument and principles of polarographic analysis, and a bibliography of more than 700 papers are available on request.

Sargent Bottle Inclinator. A convenient and safe method of dispensing acids. No. S-9620. Price \$1.50.

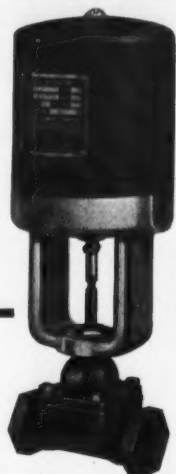
Sargent Fluorescent Titration Illuminator. Supplies soft, glareless, indirect fluorescent illumination of correct color characteristics. No. S-44290. Price \$13.00.

Sargent Balance Lamp. Soft fluorescent illumination on all parts of balance. No. S-3820. Price \$11.50.

E. H. SARGENT & COMPANY — 155 E. Superior St., Chicago, Ill.

When inquiring specify CEP5120 . . . see information request blank, pgs. 2-3

● This combination of a Barber-Colman Valve Motor with the HILLS-McCANN Saunders-Patent body provides dependable, accurate remote control for the flow of chemicals, organic and inorganic compounds, semi-solids, viscous and volatile substances, abrasives, etc. Governing switches can be automatically or manually operated. Write for further information, stating the conditions of service contemplated.



Electric

MOTOR-OPERATED VALVES

FOR AUTOMATIC OR MANUAL REMOTE FLOW CONTROL

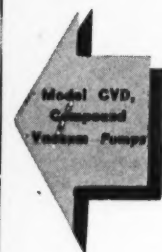
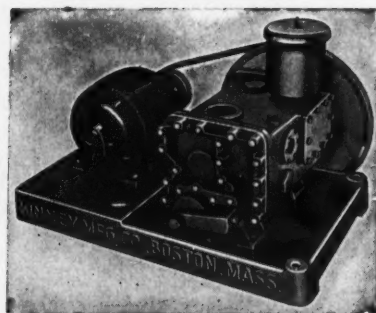
The HILLS-McCANN Saunders-Patent Valve Body is distinguished by a diaphragm and weir construction which isolates the valve stem from the flow passage, permitting the handling of materials impossible with the ordinary type of valve. Bodies can be made of corrosion resistant alloys, or lined with lead, rubber, or glass. Diaphragms are made for over 500 different services.

BARBER-COLMAN COMPANY

1201 ROCK ST. • ROCKFORD • ILLINOIS

When inquiring specify CEP5121 — see information request blank, pgs. 2-3

KINNEY VACUUM PUMPS



Kinney Model CVD Compound Vacuum Pumps produce ionization gauge readings of 0.5 microns regularly in our laboratory.

Unlike pumps using sliding vanes, the pistons in the Kinney High Vacuum Pump have no contact with the cylinder surfaces, all clearances being perfectly sealed and lubricated with oil. Because of the absence of mechanical contact, these pumps maintain their ability to produce extremely low absolute pressures over long periods without repairs or breakdowns. When operating under high vacuum, the pump is quiet and free from vibration.

They are furnished in 2 sizes, 15 and 46 cu. ft.

Write for Bulletin 18.

KINNEY MANUFACTURING CO.
3573 Washington St. Boston, Mass.

New York 30 Church St. Dallas 808 Santa Fe Bldg. Chicago 59 E. Van Buren St. Philadelphia 795 Commercial Trust Bldg. Los Angeles 1333 Santa Fe Ave. San Francisco 55 New Montgomery St.

When inquiring specify CEP5122 — see information request blank, pgs. 2-3

PRODUCTION

Rotary Centrifugal Pumping Unit

Designed for service where two dissimilar liquids must be handled through one unit



DUAL PUMP . . . for water and oils

Uses — For handling lubricating and fuel oils and water. For applications where two dissimilar liquids must be handled through the same pumping unit.

Description — Unit is mounted on a cast bedplate and is powered by a 4 HP, 3 phase 60 cycle motor with a gear-head on one end to drive a rotary pumping unit and a shaft extension on the other end connected direct to a centrifugal pump. Rotary pump has a capacity of 44 GPM at 50 psi, handling lube or fuel oil. The centrifugal pump has a capacity of 75 GPM at 25 psi handling water. Detailed specifications on this combination rotary-centrifugal dual pumping unit will be sent on request.

BLACKMER PUMP CO., Dept. CEP, 1845 Century Ave., S. W., Grand Rapids, Mich.

When inquiring specify CEP5123 — see information request blank, pgs. 2-3

New Wood Storage Cabinets Meet Most Rigid Requirements

Green finish looks like steel; Masonite construction gives strength and reduces fire hazard

Uses — To meet the steady demand for storage and wardrobe cabinets and offer a substitute for the generally unobtainable steel product that will meet requirements of utility, construction and appearance. **Features** — No priorities involved. Shipped knocked down. Harmonizing olive green enamel finish gives appearance of steel. Masonite construction reduces fire hazard.

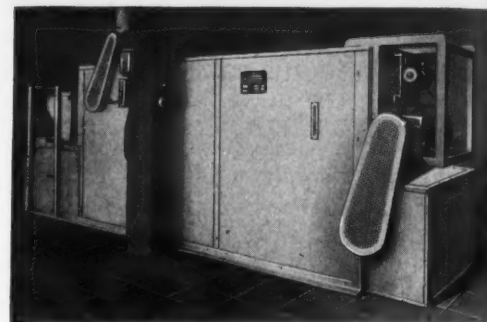
Description — Doors, sides, top, base and shelves with strong wood frames minimize possibility of warping, swelling and twisting. Frames are securely cemented to Masonite under heat and hydraulic pressure for many hours. Panels and frames properly mortised at all corners. Backs are of strong plywood. Smooth finish, all panel framework on inside. Strong vault type handles and grooved key disc tumbler lock. Only tools needed for assembly are screwdriver and pliers. Storage cabinet is 36" wide, 18" deep, 78" high. Wardrobe, combination cabinets have same dimensions.

ALL-STEEL-EQUIPMENT CO., Dept. CEP, Aurora, Ill.



WOOD CABINETS . . . harmonizes with steel units

When inquiring specify CEP5124 — see information request blank, pgs. 2-3



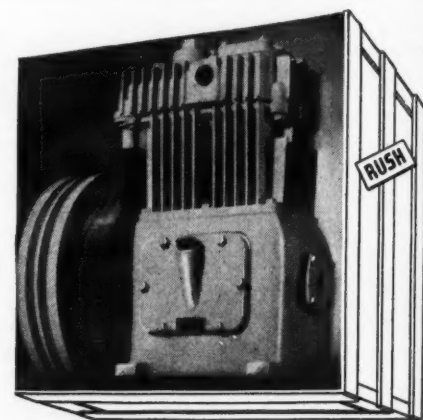
"NATIONAL" CONVEYOR TYPE CHEMICAL DRYER

Installed at one of the modern plants of Foote Mineral Company, nationally known chemical manufacturers, specially designed for the continuous drying of a highly abrasive and corrosive material. Principal advantages: Fast, uniform drying; continuous hopper feed; automatic leveller for even distribution of material on conveyor belt; pressure extraction and heating for pre-drying; drying chamber and delivery completely enclosed to prevent dusting; automatic conveyor belt tension control; low-cost operation and maintenance.

Write for Complete Information

THE NATIONAL DRYING MACHINERY CO.
2709 N. HANCOCK STREET, PHILADELPHIA, PA.

When inquiring Specify CEP5125 — see information request blank, pgs. 2-3



PROMPT SHIPMENT on priority orders

MANY large size Air Compressors are available only on allocation. If the compressor you require comes under that classification, consider using two or more Quincy Compressors to produce the required air supply. Quincy Compressors range in size from 1 to 80 c.f.m. displacement. Quincy Compressors are available for prompt shipment on priority. Write for details! **QUINCY COMPRESSOR Co., Dept. M-1, Quincy, Ill.**

Quincy
COMPRESSORS

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CHEMICAL EQUIPMENT PREVIEW

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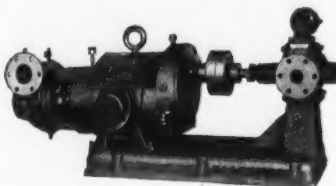
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PRODUCTION

Vertically Mounted Rotary Pump Saves Floor Space

Handling range from tar to naphtha; worn vanes replaced in 20 minutes



ROTARY PUMP,
vertical mount, saves floor space

Uses — For handling a wide variety of liquids varying in viscosities from tar to naphtha.

Features — When buckets are worn out, unit may be restored to original efficiency by simply removing head and

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Standard Covers For Ball And Roller Bearings

Eliminate high costs of individual production; any quantity quickly available at nominal cost



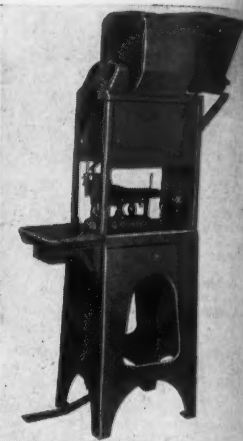
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saves "nuisance" set-ups

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Feed Weigher for powders or granules.
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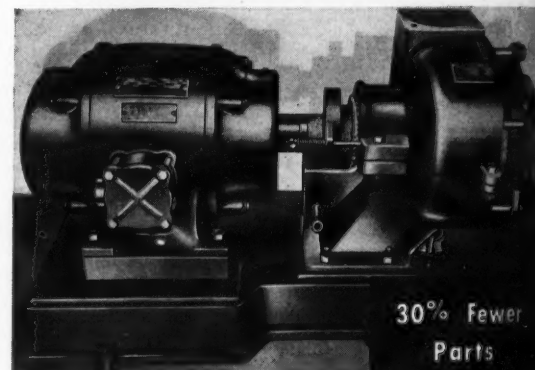
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*except hydrofluoric acid

The simplified design of this new series 697 centrifugal acid pump means longer pump life, fewer production break-downs and much lower maintenance costs.

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Parts

Withstands
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Made from
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Materials

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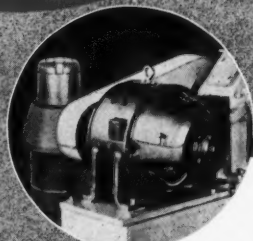
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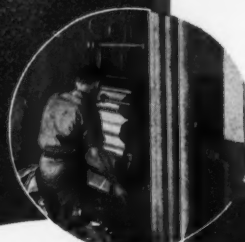
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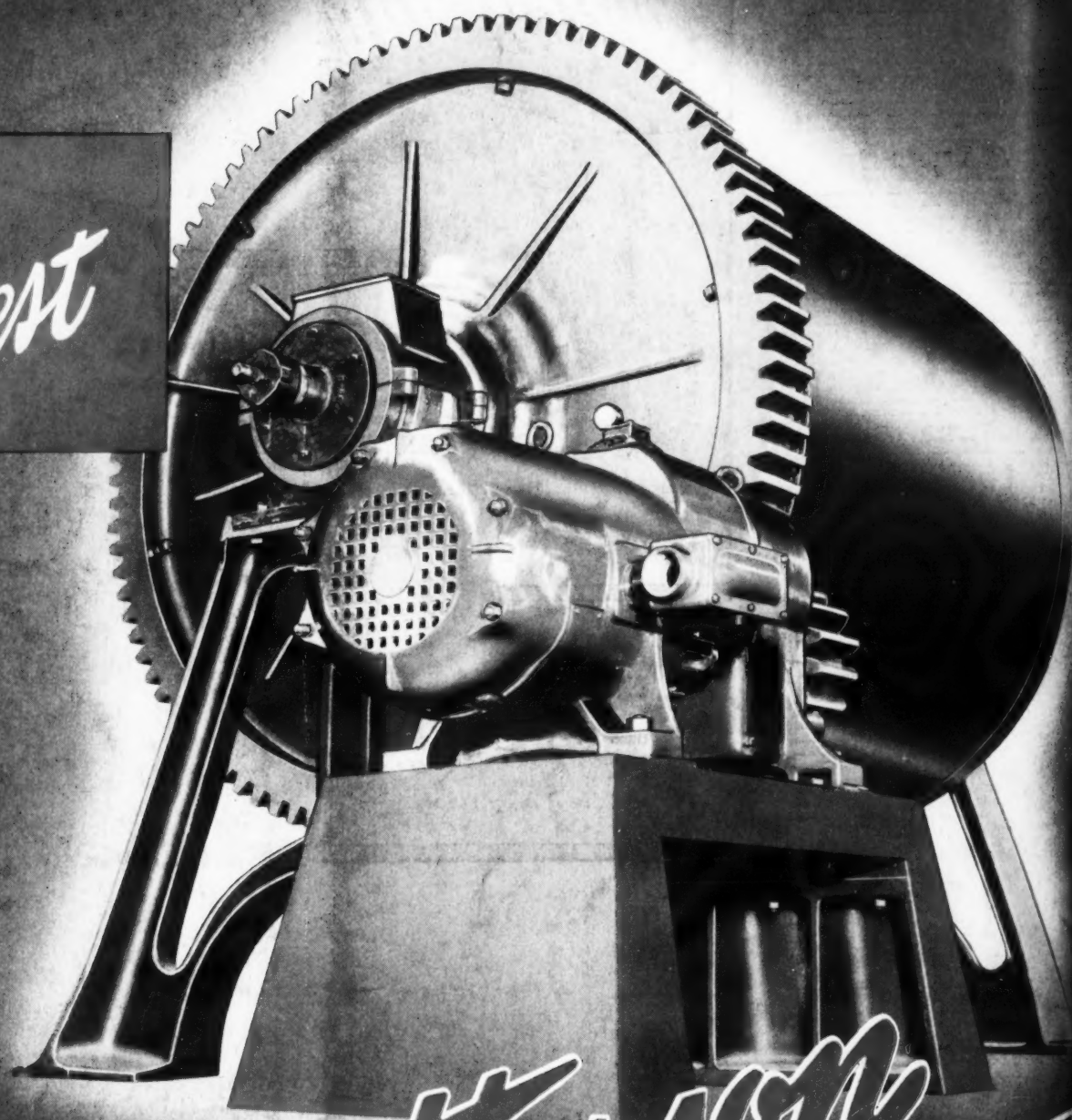
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